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## ABSTRACT

This study describes the development and design for pretesting survey instruments required for the development of programs sampling the supply and demand for educational research, development, diffusion, and evaluation personnel. The major areas of concern include: 1) the determination of number, distribution by type, and location of educational R-D-D-E personnel; 2) training requirements including areas of training, previous experience, and employer-employee training needs; 3) recruiting and selection information; and 4) planning training program content. The survey will be conducted on a national probability sample basis and give a more definitive picture of current trends regarding R-D-D-E personnel. The estimates can serve as projections for the R-D-D-E personnel and budget needs. Appendixes include American Education Research Association questionnaire, pretest employer and employee questionnaires, revised employer and employee questionnaires, and finally the cost of preparing and mailing questionnaires for field test. (Related document is SP 005 630, a design for a biennial survey which would provide a nationwide, in-depth sampling of supply and demand for educational research, development, diffusion, and evaluation personnel.) (MJM)

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DESIGN OF A SURVEY FOR DETERMINING TRAINING AND  
PERSONNEL REQUIREMENTS FOR EDUCATIONAL RESEARCH,  
DEVELOPMENT, DISSEMINATION AND EVALUATION

VOLUME TWO  
(one of two volumes)

DEVELOPMENT PRETEST OF QUESTIONNAIRES

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## Development of Survey Instruments for the Study of Educational Research, Development, Diffusion and Evaluation Training Requirements

### THE PROBLEM

Information concerning the job functions and training of personnel engaged in educational Research, Development, Diffusion and Evaluation activities (R-D-D-E) is needed by the Research Training Branch (RTB), Division of Research and Development Resources, National Center For Educational Research and Development (NCERD) in order to assist in the development of programs responding to requirements for trained personnel in those activity areas. Certain of the questions relating to types of employment, numbers employed, experience and educational backgrounds of current employees, training needs and areas of current and future employment can best be answered through data from a national survey of employers of R-D-D-E personnel and of the personnel themselves. Stanford Research Institute has been given the responsibility for developing and pretesting the required survey instruments.

There are a number of RTB tasks to which the survey information will contribute. The first of these is the determination of the number, distribution by type, and location of educational R-D-D-E personnel. A number of previous studies have provided some of the information needed in these areas, but the proposed survey will be conducted on a national probability sample basis and give a more definitive picture of the current situation as regards educational R-D-D-E personnel. The estimates from the survey can be used as a basis for projections of the need for educational R-D-D-E personnel as that need relates to increasing R-D-D-E budgets.

A second major focus of the survey will be training requirements, since RTB must develop plans and programs and specify funding for consortia

or other training arrangements. Survey items relating to disciplines in which current R-D-D-E employees are trained, previous experience and employees' and supervisors' stated training needs will contribute to such planning and programming. A related matter is that of the transferability of personnel trained in behavioral or social science or in other disciplines into educational R-D-D-E jobs. Such personnel constitute a pool from which needed employees might be drawn, and it will be useful to know what kinds of skills they may have, and types of previous employment and training needs as perceived by themselves and their supervisors. Such information will provide one basis for planning retraining or updating programs.

Planning training program content requires knowledge of the skills needed in various kinds of R-D-D-E jobs, and the survey will provide such information as well.

Recruiting and selection information will also be provided by the survey.

#### QUESTIONS ORIGINALLY POSED BY THE RESEARCH TRAINING BRANCH

The following questions were posed originally by RTB for possible inclusion in the survey:

- How many people are presently (at the time of the survey) employed in educational R-D-D-E activities in the United States?
- In what types of activities are they employed?
- How many are employed at each of several professional levels?
- What are the average annual salaries by levels?
- What proportions are full time and part time employees?
- How are educational R-D-D-E employees distributed with respect to ethnic groups, sex and geography?
- In what types of institutions are educational R-D-D-E personnel employed?
- What kinds of job preparation have they had, including formal preservice education, inservice education and training and on the job training and experience?
- What is the average length of service in the same job activity, at the same level and in the same institution?
- What value level do employees assign to their work as compared to other jobs for which they might be qualified?
- What possibilities for advancement do they see in their work?
- What proportion view themselves as skilled in other areas of education?
- How many additional persons will be employed in educational R-D-D-E in three years from the period of the survey?
- How much additional employment will result from turnover rather than growth as personnel leave educational R-D-D-E or are promoted.

- In a non-growth situation, how will changes in R-D-D-E activities be reflected in demands for differing job skills?
- If needed skills remain stable, how much additional employment will result from increased funding of educational R-D-D-E?
- How will fluctuation in educational priorities and funding be reflected in differing demands for job skills?
- What are the preferences for training by type, i.e., preemployment, formal postemployment, or on-the-job, and what is the willingness of employers to pay for needed employee training?
- What kinds of recruitment and selection procedures and criteria are used?
- What importance do employers place on degrees as employment requirements?
- What skills and skill groupings are needed in educational R-D-D-E?
- At what level do employers rate quality of skills in their employees?
- How satisfied are employees with their R-D-D-E jobs?

The questions were many and diverse, and the task was to fit them into instruments of usable length and minimal complexity so as to obtain a satisfactory rate of return.

## DEVELOPMENT OF THE QUESTIONNAIRES

Two basic types of instruments were required, one to be filled out by employers or supervisors and one by employees. A substantial body of background information was examined prior to designing the questionnaires and writing the items. In particular, the listing of R-D-D-E skills prepared by the American Educational Research Association (AERA) Task Force on Training of Educational Research Personnel was found to be comprehensive and very useful. The pretest questionnaires used most of these items substantially as they were originally written. All of the items are given in Appendix A. Another source that provided item formats for the final version of the questionnaires was The General Position Activities Questionnaire prepared by Teaching Research, a division of the Oregon State System of Education.

Ultimately, two versions of the employer questionnaire, designed to be used by two different types of employers, and four versions of the employee questionnaire were produced and pretested. The necessity for four versions of the employee instrument was based on our desire to use most of the 94 comprehensive skill items on the AERA list, but to reduce the response burden on any one individual, in accordance with the general guideline for all questionnaires that they require minimum respondent time consistent with the valid and reliable acquisition of the necessary survey information.

Questionnaires were designed for use in a two-stage survey with employer questionnaires mailed first, followed by the employee questionnaires sent to a sample of employees selected on information provided by employers on their questionnaires.

Format and content of both types of questionnaires were heavily influenced by the information obtained in a series of interviews conducted



with local education agency personnel and with supervisors and employees in a variety of research and development organizations in the San Francisco Bay Area. These interviews included discussion of the RTB information needs in relation to the kinds of information that each type of agency could and would be willing to provide, consideration of appropriate formats for various kinds of questions, and general discussion of the problems relating to R-D-D-E employment and training.

#### Employer Questionnaires

Two primary types of employers of R-D-D-E personnel were to be surveyed. The first of these were leaders of educational R-D-D-E projects funded by the U. S. Office of Education, the Office of Economic Opportunity, or the National Science Foundation. The second were leaders of R-D-D-E units in school districts. Additional smaller but not less important groups of respondents included leaders of projects or units situated in governmental bodies at Federal, State or County levels and personnel in Federally funded research and development laboratories and centers. It was hoped that questionnaires prepared for the first two categories would also be appropriate for these latter groups with minimal modification.

The previously listed questions posed by RTB formed the basis for development of the following areas that were covered in the employer questionnaire:

- Identification of respondents, their institutions and projects or work units (identification information asked for in questionnaires sent to project leaders differed in some respects from that to be obtained from local education agency work units)
- Identification by percentage of time spent on each of the kinds of work performed by the units or project personnel

- Identification of skills and content area knowledge difficult to find in recruiting and selecting personnel
- Recruiting procedures and methods used with estimates of their effectiveness
- Selection techniques used with estimates of their effectiveness
- Numbers of employees and full time equivalents in each of seven personnel categories including director or principal investigator, research and development associate, assistant, intern, technician paraprofessional and clerical, with estimates of education and experience required for successful performance in each category and listing of formal organizational requirements for each category
- Estimates of adequacy of previous training of current employees in each personnel category
- Description of kinds of in-house employee training used with specification of frequency of use
- Estimates of need for additional training in each of a variety of educational R-D-D-E activities (selected from the AERA list) and indication of areas in which training materials would be desired
- Indication of value placed on each of a variety of training approaches for current employees
- Indication of number of current unfilled positions, losses in the last year and additions in the last year for each personnel category
- Estimates of number of employees in each personnel category to be hired in the coming two years

- Estimates of need for additional employees by type and skill if funding were increased by 50% in the coming year

It was anticipated that information in each of those areas drawn from appropriately structured samples of project directors, local education agency unit directors and federal and state education personnel would provide a full picture of personnel shortages and training needs seen from the point of view of employers of educational R-D-D-E personnel

The employer questionnaire was also to ask for a listing by name of current employees from which a sample of employees could be drawn by the survey agency. The sample members were then to be sent employee questionnaires.

The employer questionnaire was subjected to a number of revisions in order to reflect the comments of the persons who were interviewed and to reduce it in length and complexity so as to enhance the probability of achieving a high return rate of usable questionnaires. It was recognized that the number of areas to be covered might be so great as to make the pretest questionnaire excessively long, but we felt it necessary to use the pretest results as one of the primary bases for cuts, so there seemed to be no alternative to mailing a long version informing the respondents that it was a pretest and asking their cooperation in helping us to tighten up the instruments for ultimate use.

Copies of the pretest mailout employer questionnaires are in Appendix B.  
Employee Questionnaires

As indicated above employees in the projects and units to whom employer questionnaires were sent were also asked to respond to a questionnaire concerning their work activities, experience and training. It was desired

also that the employee and employer questionnaire have some common items so as to permit cross comparisons between the two groups of respondents.

The following areas based on the original RTB questions covered in the employee questionnaires:

- Identification of respondents, their institutions and projects or work units, their ages, sex, salaries, and formal education levels
- Indications of levels of involvement in a variety of R-D-D-E activities, experiential or educational source of the acquisition of the skills needed for each activity and estimates of the need for additional training in the skills needed for each activity.
- Amount of formal course work in each of a variety of educational areas
- Amount of in-house or on-the-job training obtained since employment in R-D-D-E fields
- Specification of educational R-D-D-E in which respondents are currently active with their estimates of the degree to which their skills have increased in each activity during present employment and of the amount of additional training needed in each activity area. (The activity areas listed were identical with those on the employer forms so as to permit comparisons of the training need perceptions of both groups of respondents)
- Types of previous employers, years spent with each and estimates of relevance of each previous type of employment to current jobs
- Existing skills not used on current jobs
- Job satisfaction

- Estimate of advancement possibilities
- Value to respondent of various types of training or training materials
- Importance of college credit for additional training

There were four versions of Questionnaire B for employees. They differed only in respect to the lists of educational R-D-D-E items that were included in each. The problem was to use all of the carefully developed list of AERA items, but not to overburden any one respondent. Ten items were common to all lists. The remaining 84 items were divided equally (21 each) among the four versions so that each individual would respond to a total of 31. The wording of some items was changed (usually by shortening) for our purposes.

The ten common items were as follows:

- Identifying and delineating significant researchable problems
- Interpreting and drawing appropriate conclusions and implications from data analyses
- Specifying desired performance outcomes (objectives) of instruction
- Describing a product to be developed
- Selecting the most effective dissemination vehicles to convey information to target groups
- Implementing actual dissemination, including the direction of technical production personnel
- Identifying and rating alternative strategies for attaining the selected educational system objectives
- Identifying and rating available educational program resources (human, material and financial) and/or potential sources of support

- Developing general criteria and designing data collection procedures for application in measuring the effectiveness and efficiency of existing innovative practices and products,
- Selecting (or developing) and using techniques of measurement to yield information relevant to standards to be used

The set of ten items listed were chosen as the common ones because they include some from each of the R-D-D-E categories and because the items listed were among those receiving the highest number of mentions as most important or critical in the AERA survey and regarded as significant for the proposed survey.

Information from employee questionnaires was expected to supplement and complement that from employer questionnaires so as to provide a comprehensive picture of educational R-D-D-E personnel characteristics, experience and training backgrounds and training needs.

The mailout employee questionnaires are in Appendix B.

#### DESCRIPTION AND CONDUCT OF THE FIELD TEST

The field test was designed to duplicate as much as possible under the necessary time constraints, the conditions that would obtain in the main survey effort itself. Respondents were informed, however, that the questionnaires were being pretested, and they were asked to comment on any and all aspects of content of format and to suggest any changes that they felt might be appropriate. Both the response rate and the response time may have been affected by the request to comment on the questionnaire, but it was felt necessary to do so in order to pretest thoroughly.

The mail pretest had been preceded by a substantial number of interviews with project and Local Education Agency (LEA) unit directors and their subordinates and with questionnaire specialists in which earlier versions of the questionnaires were gone over in detail to obtain comments and criticisms. Interviewees were asked to indicate the appropriateness of each of the items as it related to their activities, whether or not they could answer each unequivocally, and their detection of ambiguities or redundancies. The interview results were used to make further revisions in the questionnaires and procedures prior to the pretest mailout.

A special interview pretest involving Federal Government personnel was also carried out. About one dozen interviews were conducted. Respondents were asked to fill out the questionnaires while the SRI interviewer was present, and to comment on each item as they felt appropriate. Most of the respondents were from the Office of Education but the National Science Foundation and the Office of Economic Opportunity were represented as well.

Sample for the Mail Pretest

The mail questionnaire pretest was conducted primarily in the San Francisco Bay Area with some additional mailout to Southern California, Nevada, and Oregon. It was felt that a sample chosen from these areas would be sufficiently representative for pretest purposes, that the response time might be reduced by the shorter distances and that it would be easier to conduct any necessary telephone followup if the pretest were localized.

The mail questionnaire sample of California School Districts was selected according to size of the district based on student census data. The districts ranged in size from 1,000 to 770,000 and were further subdivided into the following intervals.

<u>District Size</u>	<u>Number of Districts Sampled</u>
50,000 or more	9
25,000 to 49,999	12
12,000 to 24,999	17
Less than 12,000	<u>26</u>
Total sample 64	

The second population sampled consisted of universities and organizations with current on-going projects related to educational R-D-D-E. These projects were categorized by dollar amount of the contract or grant with a range from \$5,000 to over \$200,000 and divided into the following intervals.

<u>Project Dollar Amount</u>	<u>Number of Projects Sampled</u>
200,000 or more	11
100,000 to 199,999	10
50,000 to 99,999	11
Less than 50,000	<u>9</u>
Total sample 41	



Another group to whom questionnaires were sent were Federally sponsored Research and Development Laboratories and Centers. These organizations are major employers of R-D-D-E personnel, and it was essential that they be included.

Questionnaires were also sent to the State Departments of Education in California, Nevada, and Oregon.

For the purposes of the pre-test, only two of the four employee forms were used. The overall scheme for the mailing was as follows:

	Package with Questionnaire A and 4 Questionnaire B		Questionnaire A only to return list of names		Total sent
	Form B1	Form B2	Form B1	Form B2	
School District	22	20	12	10	64
Project or Unit Director	15	12	8	6	41
Total	37	32	20	16	105

#### Description of the Questionnaire Mailing

Two general methods were employed in mailing the questionnaires to both project directors and school districts. The first of these involved enclosing four "employee" forms (Questionnaire B) with the "employer" form (Questionnaire A) with the request that the individual receiving the package route them to the appropriate respondents. The second method included a page in Questionnaire A on which the respondent could write in the names of a sample of individuals working on the project who would be potential respondents on Questionnaire B. A procedure for choosing the names from a roster of project or unit staff was included also. The intent of this dual procedure was to try out both methods for possible future use in the final survey.

The ultimate choice of method was to be based on the kinds of responses received from the two approaches, on which method would produce the most satisfactory sample of employees and on any time limitations that might exist, since two separate mailings may be expected to take longer in view of the need to get fairly complete returns from the first mailing before structuring the sample and sending out the second mailing. The latter procedure has an advantage, however, in that it permits the survey contractor to choose the sample from a complete roster rather than having its choice based on local sampling that might not always be carried out strictly in accordance with the instructions given.

#### Questionnaire Returns

All Questionnaires were mailed on or before November 20, 1971 with the first returns being received approximately four days later. Between the time of the initial return and December 3, 1971 (the first two week period) there were 30 returns from school districts and 8 from project or unit directors. During the following three week period the returns were 9 and 6 respectively. Although these figures represent both complete and incomplete forms, they do indicate that the majority of responses will be received within two or three weeks of the initial mailing date. This is consistent with SRI experience in previous surveys.

Of the returns received during the first two weeks there were three completed by Project Leaders and three completed by School Districts. Three incomplete returns were received from Project Leaders and 23 from School Districts. It should be noted that most of the incomplete returns from School Districts resulted from the fact that they did not employ at least one full time person or full-time equivalent in R-D-D-E as they understood the descriptions of these activities. We established the criterion of one

full time employee or equivalent as determined whether or not the form should be filled out. A few incompletes were from districts that routinely refuse to fill out questionnaires, of which there are an increasing number. A probable additional factor in accounting for low return rates in recognition that there have been previous and fairly recent surveys in this field and an inability to understand why it is necessary to conduct another survey. Some projects involve only one or two people, and it may have been difficult for them to see how the personnel survey was relevant to their activities, especially if employees are graduate students or other faculty members. A few commented to that effect. Some directors of larger projects could not see the relevance of the survey to their concerns, felt that their organization, staffing and funding were not appropriate to the survey questions, that previous work with which they were familiar had already covered the area or simply did not want to take the time to fill out an instrument relating only peripherally to their work.

All pretest returns were examined carefully so as to insure that no relevant comments were missed, but there was no attempt to tabulate the results in view of the awareness of the respondents that the questionnaires were being pretested, the limited returns in some categories, and our primary interest in format and wording rather than specific responses to the questions.

#### Comments and Recommendations Received in Returns

The mail pretest returns included a number of comments, recommendations and suggested changes. The following (listed roughly in order of frequency of mention from highest to lowest) appeared most prominently:

- The questionnaires should be reduced in length. (The pretest instruments had, of course, contained more items than would ultimately be used, but we felt it essential to get reactions to all of them in order to determine which ones should be selected for the final questionnaires.)
- The number of R-D-D-E activity and skill items should be reduced on both questionnaires
- The multiple responses required for the R-D-D-E activity and skill items should be reduced on the employee questionnaire
- The R-D-D-E activity and skill items should be reworded, made more pointed and shortened on both questionnaires
- The item on the employer questionnaire having to do with percentages of time devoted to various kinds of activities should be reformatted and the response task simplified.
- The question on the employer questionnaire asking for an indication of need for training for employees in each of a number of activities should be eliminated because the employer could not make such judgements for all of his employees considered as a group
- The personnel categories on the employer questionnaire should be reduced in number and consolidated so as to make it clear what the distinctions are. Some organizations use other systems of categorization, and there is insufficient uniformity to permit unequivocal responses to the item.

Comments on the Questionnaires from Federal Agency Personnel

Federal Agency respondents filled out the questionnaires while the SRI interviewer was present so there was an opportunity for the exchange of ideas. The following comments were made:

- The questionnaires lack direct relevance to the work activities and positions of most Federal employees, primarily because they administer and monitor the R-D-D-E activities of others rather than conducting them.
- Questions relating to funding and its relationship to manpower have a different meaning for Federal personnel, since budget justifications must include specific personnel requirements.
- Questionnaires should be shortened so as to conserve respondent time.
- There is some confusion about tenure in the present job for Federal employees since they often transfer within an organization.
- The list of activities in the employee questionnaire should be shortened and meanings clarified.
- On the employer questionnaire, the list of activity items in Question 9 was felt to represent several levels of generality, and some should be subsets of others.
- The rating of percent of effort devoted to various activities (Question 1) was felt to be very difficult to carry out, and it was suggested that there was a need for specifying either man hours or dollars
- The personnel categories on the employer questionnaire were not appropriate for federal employees and distinctions among the categories were not entirely clear.

- In general, respondents felt that a somewhat broader view of R-D-D-E and R-D-D-E personnel should be taken. This may have been due to their not having seen all of the work activity items, although they were informed that the list they saw was not meant to be comprehensive.

Cost data for the preparation and mailing of the questionnaires is provided in Appendix D.

## REVISIONS RESULTING FROM THE PRETEST

The questionnaires were subjected to four or five revisions prior to the mail pretest. The early changes were based on conversations with questionnaire specialists at SRI and elsewhere and the reactions of school district and project personnel who were interviewed and asked to comment in detail on each of the questionnaire items. Most of the changes prior to the mail pretest had to do with the wording and format of the items with the aim of insuring that potential respondents would understand the instructions and the items and be able to give unambiguous responses to them. The areas to be covered were not changed during the preliminary revision phase.

### Revisions to the Employer Questionnaire

A copy of the revised Employer Questionnaire is in Appendix C.

The cover letters were revised so as to be appropriate for the final survey rather than the pretest. A draft of an additional cover letter to be sent from The Bureau of Elementary and Secondary Education (BESE) or The National Center for Educational Statistics (NCES) to school districts, or from the project sponsoring organization of The National Center for Educational Research and Development (NCERD) or NCES to Project Directors were also prepared for use in obtaining cooperation from potential respondents. In the case of National Science Foundation or Office of Economic Opportunity sponsors the letter would come from them.

R-D-D-E activity descriptions were made more operational. Minor changes in identifying information were made also.

Each item in the mailout questionnaire will be described below, and any changes will be specified.

Pretest  
Question  
Number

- Question 1 required an estimate of percent of effort devoted to a variety of activities. In the revised form the number of activities has been reduced, and those remaining are more closely centered around R-D-D-E. Response is now in terms of the four categories of "large", "moderate", "small" or "no part" of the effort instead of percentage estimates.
- Question 2 concerning skills or sensitivities that have been difficult to find in recruiting is now Question 10, and it has been reworded slightly.
- Question 3 concerning content area knowledge that has been difficult to find in recruiting is now Question 11, and it has been reworded slightly.
- Question 4 concerning recruiting procedures used and their degrees of effectiveness is now Question 12.
- Question 5 concerning selection techniques used and their degrees of effectiveness is now Question 13.
- Question 6 concerning the number of employees in each of seven personnel categories and the respondents' and his organizations' requirements for each position is now Question 2. The previous categories were as follows:



- Director or principal investigator  
Full responsibility for a program or a large scale project
- Research and Development Associate  
Full responsibility for medium size and smaller projects
- Research and Development Assistant  
Responsibility under supervision for some part of a project  
such as for data collection and reduction
- Research and Development Intern  
Carries out assigned specific tasks under supervision
- Technician  
Carries out assigned specific tasks requiring limited  
technical skills under supervision
- Paraprofessional  
Carries out assigned specific tasks requiring little or  
no technical skill under supervision
- Clerical

The new categories are:

- Professional  
Substantial responsibility for carrying out project or  
unit tasks independently
- Paraprofessional  
Responsibility for carrying out project or unit tasks  
under moderate to heavy supervision, with little  
independence of action
- Technical  
Trained for and carries out specific project activities  
such as computer programming, audio-visual aid preparation  
or art work

- Clerical

Routine typing, filing, numerical and other clerical tasks

The respondent is now asked only to provide the numbers of full-time and part-time employees and the number of full time equivalents. The requirements categories have been eliminated.

Question 7 concerning previous training for each personnel category has been eliminated.

Question 8 concerning varieties of in-house employee training used is now Question 7 and the request to indicate numbers of times used, percent of employees enrolled, time required, and course descriptions has been eliminated.

Question 9 concerning R-D-D-E activities in which employees needed training and desired training materials has been eliminated.

Question 10 concerning the value of various training approaches is now Question 8.

Question 11 concerning unfilled positions, losses, and personnel added is now Question 4. The personnel categories have been changed as in Question 2 on the final form.

Question 12 concerning anticipated hiring in the next two years is now Question 5. Personnel categories are as in Questions 2 and 4.

Question 13 concerning hiring if additional funding were available is now Question 6 and the increase in funding has been reduced from 50 to 25 percent.

Question 14 asking for a listing of personnel by name is now Question 3, and there is an additional requirement to specify either full time or the fraction of full time that was worked for each employee.

A rationale for each of the questionnaire items has been appended in addition.

The general effect of the revisions is to shorten the instrument and make the response task simpler and easier.

#### Revisions to the Employee Questionnaire

The revised Employee Questionnaire is in Appendix C.

The cover letter was revised so as to be appropriate for the final survey rather than the pretest. Additional assurances regarding confidentiality were included.

Minor changes in identifying information were made.

Each item in the mailout questionnaire will be described below, and any changes will be specified.

#### Pretest Question Number

Question 1 was the list of 31 activity items (10 common and 21 different on each of the four forms). Respondents were to indicate their degrees of involvement in each, the means by which they acquired the skills for each, and the extent of their felt need for training in each set of skills. This is now item 3. There is one form, and it includes only 25 of the items from the AERA list. Ten items are common to the original four lists. The remaining 15 were selected from the four lists. All have been reworded in much briefer form. Response requirements

have also been simplified. We adopted the seven-point scale for degree of involvement in each activity that was devised by Teaching Research, a Division of the Oregon State System of Education on their General Position Activities Questionnaire. Interest in additional training is indicated by entering a "G", "S" or "N" for "great", "small", or "no interest" in additional training.

Question 2 concerning amount of education in each of 21 different areas or disciplines remains as Question 2.

Question 3 concerning amounts of postemployment training is now Question 4.

Question 4 concerning types of previous employers, numbers of years with them and relevance to present jobs is now Question 1.

Question 5 concerning skills that the respondent has but does not use in his present job has been eliminated.

Question 6 concerning extent of job satisfaction is now Question 7 and space for comment on reasons for satisfaction or dissatisfaction has been added.

Question 7 concerning extent of advancement possibilities is now Question 8 and space for listing reasons for estimates of advancement probabilities had been added.

Question 8 concerning value placed on various types of additional training is now Question 5.

Question 9 concerning degree of importance of college credit for additional training is now Question 6.

A rationale for each of the questionnaire items has been appended in addition.

The general effect of the revisions, as in the case of the employer form is to shorten the instrument, and make the response task simpler and easier.

## RECOMMENDATIONS FOR THE CONDUCT OF THE FINAL SURVEY

Development interviews and pretest responses suggested a number of changes in procedure and questionnaire content that can be expected to contribute substantially to the success of the final survey.

The instruments were shortened and simplified so as to reduce the burden on respondents and to enhance the response rate.

In addition, however, in the final survey, it will be necessary to use procedures that will help to motivate recipients to respond, call for minimal time and effort consistent with acquiring the necessary data, provide for follow-up and analysis of non-respondent characteristics, and include in the school district sample only those districts for which there is reasonable assurance that R-D-D-E capabilities as they are defined for survey purposes do exist. In addition, personal contacts by telephone and, in some cases, in person may be required to help in motivating potential respondents to provide the needed data.

Specific recommendations are as follows:

- The survey should be carried out on a two-stage basis with project directors and school district unit leaders receiving the employer questionnaire and a request for a listing of professional and paraprofessional employees. The lists should be used by the survey contractor to select a sample to whom the employee questionnaires are sent. The procedure in which the respondent selects the sample from among his employees in accordance with instructions is subject to error or carelessness or unwillingness on the part of some respondents to undertake it. The two stage procedure was not fully carried out in the pretest because of time constraints. At least three months from the initial mailout date should be allowed for completion of both stages.

- If lists of personnel on federally funded projects can be obtained, the list for each project could be sent to the project director with the request that he correct it. This procedure would reduce the listing process to a minimum.
- Each School District Employer questionnaire should be accompanied by a cover letter from The Bureau of Elementary and Secondary Education (BESE) or National Center for Educational Statistics (NCES) asking for cooperation in the survey. Each project employer Questionnaire should be accompanied by a cover letter from NCES or the appropriate Office of Education, Office or Economic Opportunity, or National Science Foundation Division head.
- The content of the final survey questionnaires should be essentially as it now appears in the drafts included in this report. Some alterations may be desirable as the Oregon Studies (Teaching Research, Monmouth, Oregon) and AERA data are subjected to further analysis, since those surveys have covered work activities quite thoroughly.
- Before mailout, the final survey questionnaires should be put in booklet form, print size should be reduced, and both sides of each sheet used so as to reduce bulk as much as possible. Layout and margins should contribute to an attractive appearance, an uncluttered look and to ease of response.
- Questionnaire blanks should be precoded for punching and computer processing in accordance with the processing and analysis plan to be used.

- A follow-up mailout to non-respondents should be undertaken in from two to three weeks after the initial mailout.
- An analysis of non-respondents should be undertaken in order to determine any differences from those who did respond.
- Mail questionnaire data should be supplemented by data from in person or telephone interviews conducted with a sample of 100-200 employers and employees. The interviews should explore in depth the areas included on the mail questionnaires, with particular emphasis on work activity patterns and training and experience requirements. Respondents are usually willing to give time for an interview, even when they may be quite unwilling to devote a lesser amount of time to filling out a questionnaire. Standardized interview guides should be prepared so as to insure comparability of information from interview to interview and to questionnaire data as well as easy summarizability of the interview materials themselves.
- The cooperation of the Association of Great City Schools should be enlisted in order to obtain its assistance in getting responses from the large school districts in which a substantial proportion of school system R-D-D-E personnel are employed.
- Federal employee responses should be obtained by interview, with the use of a specially designed interview guide since in general the type of monitoring activity going on in most Federal agencies does not lend itself to appropriate responses to the kinds of questions included in the basic questionnaires.



- State agencies have been surveyed exhaustively by The Institute for Educational Development. It appears that most of the information required from State levels can be obtained from their analyses and reports, and it is recommended that the final survey not include State agencies unless a need becomes apparent later.

Appendix A

AMERICAN EDUCATIONAL RESEARCH ASSOCIATION QUESTIONNAIRE ITEMS

Skills Necessary for Research

1. Drawing research implications from results of prior research studies.
2. Identifying and delineating significant researchable problems.
3. Procuring and/or managing resources (material and human) necessary to reach research objectives.
4. Interpreting, evaluating, and synthesizing relevant literature.
5. Formulating hypotheses or empirical questions to be answered by the study.
6. Specifying data or evidence necessary for a rigorous test of the hypothesis.
7. Identifying the population to which results should be generalized and a sample representative of that population, using appropriate sampling techniques to draw the sample.
8. Formulating alternative generalizations from predicted research outcomes.
9. Identifying appropriate research methods.
10. Understanding experimental, quasi-experimental, and other systematic approaches to inquiry, and drawing on such knowledge in designing a research study appropriate to the problem under consideration.
11. Applying the research design, recognizing, explicating and controlling threats to validity.
12. Identifying classes of behavioral outcomes for measurement.
13. Choosing specific variables and treatments (where appropriate) to be used.
14. Selecting appropriate techniques of measurement.
15. Developing measuring instruments.
16. Assessing the validity of outcome measures.
17. Using a variety of data-gathering methods (tests, interviews, analysis of documents, etc.).
18. Organizing data for analysis.
19. Understanding the general role, types, and assumptions underlying various statistical techniques, and drawing on such knowledge in selecting and using appropriate techniques of data analysis.
20. Using aids in data analyses, such as computer processing.
21. Interpreting and drawing appropriate conclusions and implications from data analyses.
22. Formulating statements of a theory that offers an explanation(cause-effect relationship) of the behavior under study.
23. Reporting research findings and implications, orally and in writing.

Skills Necessary for Research-based Development  
(Including Product Testing)

1. Interpreting information concerning education goals
2. Drawing on research results in planning developmental activities.
3. Conceptualizing systems, their elements, and interrelations among these elements.
4. Specifying desired performance outcomes (objectives) of instruction.
5. Devising techniques to identify entry capabilities of learners.
6. Identifying alternative instructional and media techniques.
7. Determining appropriate sequences of topics in instruction.
8. Describing the product to be developed.
9. Composing effective oral and written forms of instructional communications.
10. Directing the work of production personnel.
11. Selecting or devising appropriate techniques for measuring outcomes.
12. Designing and managing initial laboratory tests of developed techniques and materials.
13. Designing and managing field tryouts and tests.
14. Reporting evaluation of outcomes.
15. Interpreting evaluation findings.
16. Specifying requirements for revision based upon outcome evaluations.

### Skills Necessary for Diffusion

#### Dissemination

1. Defining and analyzing characteristics of target group(s)
2. Selecting from all available information about developed packages that which can be most effectively disseminated.
3. Selecting the most effective dissemination vehicles to convey information to target groups.
4. Composing the information, within a chosen format, for accurate and pervasive dissemination.
5. Implementing actual dissemination, including the direction of technical production personnel
6. Designing and implementing techniques for evaluating the effectiveness of the dissemination effort.

#### Demonstration

1. Specifying nature of the demonstration.
2. Selecting appropriate setting and personnel for demonstration.
3. Managing and coordinating the demonstration effort.
4. Evaluating the effectiveness of the demonstration.

#### Facilitating Adoption

1. Identifying features of the adopting organization or system which differ from those in which the product was developed and tested.
2. Designing modifications of the product to fit the adopting organization or system, when necessary.
3. Designing procedures for modifying the adopting system or organization to fit the product, when necessary, including the design of needed training programs.
4. Identifying potential barriers to implementation.
5. Devising and conducting long-range evaluation of the installed package.

Skills Necessary for Context Evaluation/Situations Analysis

1. Identifying goals of the system.
2. Assessing the social relevance of those goals.
3. Identifying values that are implicit in the system goals.
4. Identifying the nature of the standards or norms the decision-makers will apply in interpreting the relevant data which may be provided.
5. Clarifying and explicating desired outcomes of the system.
6. Measuring current actual outcomes of the system through techniques such as:
  - a. demographic analysis
  - b. economic analysis
  - c. psychometric analysis
  - d. systems analysis
  - e. observational techniques
7. Comparing actual and intended system outcomes to identify discrepancies (needs) which exist in the system.
8. Explicating the problems that create the needs and diagnosing the causes of these problems.
9. Helping system personnel to develop objectives which, if attained, will satisfy the needs or solve the problems identified above.
10. Designing a monitoring system that will provide continual data (of the type above) on the status of the operating system.

Skills Necessary for Process Evaluation/Program Monitoring

1. Designing and selecting indicators of progress in educational programs.
2. Monitoring the programs to detect deviations from design or specified procedures through techniques such as unobtrusive measures, systems analysis, and observational techniques.
3. Anticipating predicted barriers and remaining alert to unanticipated problems that threaten the success of the program.
4. Providing immediate feedback to program operators for their possible use in making decisions about modifications of the plan, procedures, or resource allocations.
5. Perceiving human relation problems that threaten the success of the program.

Skills Necessary for Outcome Evaluation

1. Applying appropriate designs to evaluation studies.
2. Developing general criteria and designing data collection procedures for application in measuring the effectiveness and efficiency of existing innovative practices and products, i.e., minimum standards and outcomes which indicate successful utilization of practices and products.
3. If necessary, translating objectives into behavioral terms.
4. Identifying situations in which the designated behavior can be observed and recorded.
5. Establishing standards or norms for judging whether objectives have been attained.
6. Selecting (or developing) and using techniques of measurement to yield information relevant to these standards.
7. Assessing the validity of outcome measures.
8. Collecting and organizing the data preparatory to analysis.
9. Selecting an appropriate technique to analyze the data.
10. Analyzing the evidence yielded by the evaluation.
11. Judging the strengths and weaknesses of the plans and procedures employed for meeting the project objectives.
12. Deciding how to explain the outcome as a function of plans, procedures, and resources.
13. Deciding what recommendations to make as a result of the outcomes.
14. Estimating the potential impact of the outcomes on the problem area being served.
15. Providing sufficient information to the decision-maker to enable him to decide whether to continue, modify, or terminate the activity or process evaluated.
16. Specifying changes that need to be made in the context evaluation system due to decisions about program continuation.



Skills Necessary for Program Planning/Input Analysis

1. Helping system personnel to apply criteria to lists of possible objectives in order to select those which are feasible within constraints of the operating context.
2. Helping system personnel to establish priorities for the selected objectives.
3. Identifying and rating alternative strategies for attaining the selected objectives.
4. Identifying and rating available resources (human, material, and financial) and/or potential sources of support.
5. Selecting a strategy for implementation.
6. Selecting a source of support or the available resources which will be used to implement the program.
7. Predicting the potential barriers to success in the proposed course of action and judging the potential of the strategy for overcoming the estimated procedural barriers.
8. Identifying alternative tactics to implement selected strategy and choose those that seem most likely to succeed.

Appendix B  
PRETEST EMPLOYER AND EMPLOYEE QUESTIONNAIRES

## STUDY OF EDUCATIONAL RESEARCH, DEVELOPMENT, DIFFUSION, AND EVALUATION PERSONNEL TRAINING REQUIREMENTS

The Far West Laboratory for Educational Research and Development is developing a design for a study of training and personnel requirements of employers and employees engaged in educational research, development, diffusion, and evaluation (R-D-D-E). The intent of the study is to develop and justify more effective plans for the development and support of federally sponsored programs designed to respond to requirements for trained personnel (and training capabilities) in educational R-D-D-E. A "base-line" study, national in scope, technically adequate in design, and addressing itself to priority information requirements is needed.

In order to reduce the burden of response, sampling survey methods will be used to select a limited number of educational agencies and federally sponsored projects. We have selected your agency or project to pilot test the employer questionnaire. We are also requesting your cooperation in helping us to randomly sample the professional and paraprofessional staff in your agency or project who are engaged in educational R-D-D-E work, so that we may pilot test the employee questionnaires. Copies are enclosed for your examination. There are several alternate forms which have been designed to cover a wide range of R-D-D-E activities, without overburdening individual employees. All data on employers and employees will be treated confidentially and will be analyzed and reported only by aggregates (e.g. size of funding, type of R-D-D-E work, etc.).

Because relevant, accessible training programs and training materials are important to both employers and employees, we earnestly request your full cooperation. We are especially interested in your questions or comments which may help to improve the questionnaires.

Please write on the questionnaires themselves, enclose additional written comments and questions, or call Dr. Carl Rittenhouse at Stanford Research Institute, Area Code 415, 326-6200, Extension 3367.

PLEASE FILL OUT THIS QUESTIONNAIRE AS SOON AS YOU RECEIVE IT AND RETURN IT TO US IMMEDIATELY UPON COMPLETION.

### Definition of Educational Research

Educational Research is defined as a set of coordinated activities which produce reliable knowledge that can stand the test of empirical verification regarding new facts, principles, generalizations, theories, and laws. It employs the procedures of problem stating, design, measurement and analysis that permit known degrees of generalizability of findings, and that permit also replication for purposes of verification.

### Definition of Educational Development

Educational Development is defined as the systematic use of research-based generalizations to create new educational methods, systems, materials, or devices which have practical utility. Included in development are the design and production of prototype processes and materials and also pilot trials to test their feasibility and to gather ideas for their improvement. Development may be used to generate new curriculum materials, new teaching techniques, new types of media, new ways of assigning pupils to schools, new architectural designs and so on.

### Definition of Educational Diffusion

Educational Diffusion involves procedures which communicate about, or create, the necessary conditions for the adoption and utilization of products which derive from educational research and development.

### Definition of Educational Evaluation

Educational Evaluation is defined by those activities that are necessary for determining the effectiveness of educational programs, products or procedures. In its most rigorous form, evaluation will be concerned with obtaining objective measures of effectiveness under highly defined conditions, with the ultimate judgment to be made against standards or pre-established criteria. However, other procedures also may be used that yield informal measures such as collected opinions and ratings that will form the basis of evaluation.

### Definition of Educational Planning & Analysis

Educational Planning & Analysis includes those activities through which the goals of a system are defined and for which objectives are established that are considered to be feasible within operating constraints. Objectives are prioritized and the best available strategy is determined for their attainment. Expected versus actual outcomes may be evaluated by such rigorous techniques as economic, systems or psychometric analysis; or, observational techniques may be used also. Discrepancies arising may be treated by problem diagnosis in order to remove blocks to expected outcomes; or, feedback is provided to original planning to adjust preestablished objectives.

11-10-71

QUESTIONNAIRE A

Training and Personnel Requirements

R-D-D-E (Supervisor Questionnaire)

Name of School District \_\_\_\_\_

Name of Respondent \_\_\_\_\_

Name of Unit Supervised  
by Respondent \_\_\_\_\_

Position Title of Respondent \_\_\_\_\_

Address \_\_\_\_\_

Telephone \_\_\_\_\_

Please describe briefly the kinds of projects in which you typically engage and the major functions your unit performs in the school district.

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Place a checkmark beside the type of organization in which the project resides:

_____ Educational R&D Center	_____ Public School or School District
_____ Regional Educational Laboratory	_____ State Department of Education
_____ College, School of Education, Dept. or other university office	_____ Professional Association
_____ Private non-profit organization	_____ Agency of Federal Government, Specify department _____
_____ Industry or commercial organization	_____
_____ Other (specify) _____	_____

Approximate level of project funding from all sources for current fiscal year \$ \_\_\_\_\_

Approximate level of project funding from all sources for last fiscal year \$ \_\_\_\_\_

Anticipated level of project funding from all sources next fiscal year \$ \_\_\_\_\_

Approximate percent of current fiscal year project funds from:

_____ % U.S. Office of Education
_____ % Office of Economic Opportunity
_____ % National Science Foundation
_____ % Other federal agencies (specify) _____
_____ % State (specify) _____
_____ % Private Foundation
_____ % Local School District
_____ % Industry
_____ % Other (specify) _____

PLEASE ASSURE THAT ABOVE PERCENTAGES ADD TO 100%.

1. In order to classify your project, which may involve several educational research, development, diffusion, evaluation or related planning and management tasks, please estimate the percent of current fiscal year project or unit effort which is being expended in the following areas. Show 0% if no effort in a given activity. Please read all items before answering.

1. \_\_\_\_\_ Conducting basic scientific inquiry related to educational problems.
2. \_\_\_\_\_ Conducting applied research studies directly related to educational problems.
3. \_\_\_\_\_ Investigating and assessing educational needs and requirements.
4. \_\_\_\_\_ Gathering and providing information for program planning and design.
5. \_\_\_\_\_ Locating and evaluating programs or procedures that may provide solutions to operating problems.
6. \_\_\_\_\_ Selecting, adapting or inventing solutions to operating problems.
7. \_\_\_\_\_ Developing prototype packages (innovative solutions and programs) for educational programs.
8. \_\_\_\_\_ Testing and evaluating innovative solutions and programs.
9. \_\_\_\_\_ Revising and refining prototype packages on the basis of test and evaluation information.
10. \_\_\_\_\_ Creating widespread awareness of tested solutions and programs.
11. \_\_\_\_\_ Demonstrating effectiveness of solutions and programs to target audiences.
12. \_\_\_\_\_ Training target audiences in the use of solutions and programs.
13. \_\_\_\_\_ Monitoring and adjusting solutions and programs after or during widespread installation.
14. \_\_\_\_\_ Planning and programming any of the above activities.

15. \_\_\_\_\_ Managing and supervising any of the above activities.
16. \_\_\_\_\_ Securing funding for, financially planning, and accounting for resources and expenditures of any of the above.
17. \_\_\_\_\_ Preparing reports, documentation, etc., on any of the above.
18. \_\_\_\_\_ Other (specify \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
19. \_\_\_\_\_ Training project/agency personnel to perform any of the above.  
Please list numbers of activities above to which training applies  
\_\_\_\_\_
20. \_\_\_\_\_ Training other than project/agency personnel to perform any of the above. Please list numbers of activities above to which training applies: \_\_\_\_\_  
Please also specify type of personnel: \_\_\_\_\_  
\_\_\_\_\_

PLEASE ASSURE THAT ABOVE PERCENTAGES ADD TO 100%.



2. Are there skills or sensitivities that have been particularly difficult to find in recruiting? Please describe.

3. Have you had difficulty in recruiting personnel with qualifications in specific content areas such as early childhood education, minority education, remedial reading, vocational education or others? Please specify areas.

4. Listed below are a number of recruiting procedures. First, place a checkmark in the left hand column by those you have used. Next, for each one that is checked, indicate degree of effectiveness by placing a checkmark in the appropriate column.

Recruiting Procedures	Have Used	Effectiveness of recruiting procedures		
		Minimally Effective	Moderately Effective	Very Effective
A. Journal or newspaper advertising	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Professional meeting employment services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Referral by other employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Colleges and university employment services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Informal survey of professional colleagues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Review of unsolicited applications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Recruitment from within	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Other(specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Listed below are a number of selection techniques. First, place a checkmark in the left hand column by each technique you have used. Next, for each one that is checked, indicate degree of effectiveness by placing checkmark in the appropriate column.

Selection Techniques	Have Used	Effectiveness of Selection Techniques		
		Minimally Effective	Moderately Effective	Very Effective
A. Interviews	_____	_____	_____	_____
B. Tests	_____	_____	_____	_____
C. Application blanks	_____	_____	_____	_____
D. References	_____	_____	_____	_____
E. Work samples	_____	_____	_____	_____
F. Other (specify)	_____	_____	_____	_____

Please comment on any special problems in using the selection techniques.

6. Below is a list of personnel categories arranged by level of responsibility.

Director or principal investigator

Full responsibility for a program or a large scale project

Research and Development Associate

Full responsibility for medium size and smaller projects

Research and Development Assistant

Responsibility under supervision for some part of a project, such as for data collection and reduction

Research and Development Intern

Carries out assigned specific tasks under supervision

Technician

Carries out assigned specific tasks requiring little or no technical skill under supervision

Clerical

Please complete the table below in accordance with the following instructions:

Under Section A, indicate in the appropriate columns the number of individuals you employ and the number of full time equivalent (FTE) employees represented by those individuals. If none, write 0 in the space.

Under Section B, indicate what in your opinion should be the minimum combination of education and experience requirements for each category by degree and by years of experience.

Under Section C, place a checkmark (✓) opposite those categories for which your organization has established formal education and experience requirements. Then, for those you have checked, describe the requirements (e.g., Program Associate - minimum of Master's degree and 3 years of experience, and so forth) in the space provided below.

Personnel Categories	Section A		Section B		Section C
	Employees		Requirements in your Opinion		Organizational Requirements
	Number Employed	FTE	Degree	Years of Experience	Formal Requirements
Director and Principal Investigator	_____	_____	_____	_____	_____
R&D Associate	_____	_____	_____	_____	_____
R&D Assistant	_____	_____	_____	_____	_____
R&D Intern	_____	_____	_____	_____	_____
R&D Technician	_____	_____	_____	_____	_____
R&D Paraprofessional	_____	_____	_____	_____	_____
Clerical	_____	_____	_____	_____	_____

For describing formal requirements under Section C instructions. \_\_\_\_\_

\_\_\_\_\_

7. How adequately has the previous training or experience of your employees prepared them for their present assignments? Place a checkmark (✓) opposite each personnel category and in the appropriate column that reflects your judgment of past experience or training.

Adequacy of Previous Training and Experience

Personnel Categories	Highly In- adequate	Inade- quate	Unde- cided	Adequate	Highly Adequate
R&D Associate	_____	_____	_____	_____	_____
R&D Assistant	_____	_____	_____	_____	_____
R&D Intern	_____	_____	_____	_____	_____
R&D Technician	_____	_____	_____	_____	_____
R&D Paraprofessional	_____	_____	_____	_____	_____
Clerical	_____	_____	_____	_____	_____

8. Listed below are several kinds of in-house employee training.

Check those you have used during the past year.

<u>In-house Employee Training</u>	<u>Used During Past Year</u>
A. Special supervised OJT or internship	<input type="checkbox"/>
B. One to two week short courses	<input type="checkbox"/>
C. One to five day seminars or institutes	<input type="checkbox"/>
D. Longer courses	<input type="checkbox"/>
E. Other (specify) _____	<input type="checkbox"/>
_____	

For those you checked above, briefly indicate the number of times it was offered, the percent of your employees who were enrolled, the time required and a description of the content including course titles if possible (e.g., two week course in Tests and Measurements, 3 hours per day, 25% of the staff enrolled, offered 4 times during past year). \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

9. Listed below are 30 activities that are performed in educational R-D-D-E. Under Section A, indicate the need for additional training for your employees. Place a checkmark in the appropriate column opposite each activity. Under Section B, identify five activities for which you would like to have programmed instruction or other self-study materials developed. Next, rank the five activities you have selected from "1" to "5", with Rank "1" going to the one with your highest preference, Rank "2" to your next highest preference and so forth.

Educational R-D-D-E Activities	Need for Training			Materials Desired	
	Section A			Section B	
	Little or no need	Moderate need	Great need	Rank of activities for which training materials are desired	
1. Interpreting, evaluating and synthesizing relevant literature	_____	_____	_____	_____	
2. Identifying and delineating significant researchable problems	_____	_____	_____	_____	
3. Choosing specific research variables and treatments (where appropriate) to be used	_____	_____	_____	_____	
4. Developing measuring instruments	_____	_____	_____	_____	
5. Using a variety of data-gathering methods (tests, interviews, analysis of documents, etc.)	_____	_____	_____	_____	
6. Organizing data for analysis	_____	_____	_____	_____	
7. Understanding the general role, types, and assumptions underlying various statistical techniques, and drawing on such knowledge in selecting and using appropriate techniques of data analysis	_____	_____	_____	_____	

Educational R-D-D-E Activities	Need for Training			Materials Desired
	Section A			Section B
	Little or no need	Moderate need	Great need	Rank of activities for which training materials are desired
8. Using aids in data analysis, such as computer processing	_____	_____	_____	_____
9. Interpreting and drawing appropriate conclusions and implications from data analyses	_____	_____	_____	_____
10. Reporting research findings and implications, orally and in writing	_____	_____	_____	_____
11. Specifying desired performance outcomes (objectives) of instruction	_____	_____	_____	_____
12. Describing a product to be developed	_____	_____	_____	_____
13. Designing and managing field tryouts and tests	_____	_____	_____	_____
14. Specifying requirements for product revision based upon outcome evaluation	_____	_____	_____	_____
15. Selecting the most effective dissemination vehicles to convey information to target groups	_____	_____	_____	_____
16. Composing the information, within a chosen format, for accurate and pervasive dissemination	_____	_____	_____	_____



Educational R-D-D-E Activities	Need for Training			Materials Desired
	Section A			Section B
	Little or no need	Moderate need	Great need	Rank of activities for which training materials are desired
17. Implementing actual dissemination, including the direction of technical production personnel	_____	_____	_____	_____
18. Identifying goals of an educational system	_____	_____	_____	_____
19. Clarifying and explicating desired outcomes of an educational system	_____	_____	_____	_____
20. Comparing actual and intended educational system outcomes to identify discrepancies (needs) which exist in the system	_____	_____	_____	_____
21. Designing a monitoring system that will provide continual data on the status of an operating educational system	_____	_____	_____	_____
22. Helping educational system personnel to establish priorities for selected system objectives	_____	_____	_____	_____
23. Identifying and rating alternative strategies for attaining selected educational system objectives	_____	_____	_____	_____
24. Identifying and rating available educational program resources (human, material and financial) and/or potential sources of support	_____	_____	_____	_____
25. Writing proposals for research, development, dissemination and/or evaluation projects	_____	_____	_____	_____

Educational R-D-D-E Activities	Need for Training			Materials Desired
	Section A			Section B
	Little or no need	Moderate need	Great need	Rank of activities for which training materials are desired
26. Monitoring educational programs to detect deviations from design or specified procedures through techniques such as unobtrusive measures, systems analysis, and observational techniques	_____	_____	_____	_____
27. Developing general criteria and designing data collection procedures for application in measuring the effectiveness and efficiency of existing innovative practices and products, i.e., minimum standards and outcomes which indicate successful utilization of practices and products	_____	_____	_____	_____
28. If necessary, translating program objectives into behavioral terms	_____	_____	_____	_____
29. Establishing standards or norms for judging whether objectives have been attained	_____	_____	_____	_____
30. Selecting (or developing) and using techniques of measurement to yield information relevant to standards to be used	_____	_____	_____	_____

10. How much value do you place on the following training approaches for current employees?  
Place a check mark in the appropriate "value" column

Training Approaches	Value of Approach		
	Little or no value	Moderate Value	Great Value
A. Three to five day institutes or seminars	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Longer institutes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. One to two week short courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Longer courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Internships in other agencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Correspondence courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Extension or other course arrangements with colleges or universities on a released time basis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Extension or other course arrangements with colleges or universities on an employee's own time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Indicate for each personnel category the number of currently unfilled positions, the number of losses in the last year and the number of personnel added in the last year. (If none, write "none" opposite the appropriate category.)

<u>Personnel Categories</u>	<u>Number current unfilled positions</u>	<u>Number losses in last year</u>	<u>Number additions in last year</u>
Director and Principal Investigator	_____	_____	_____
R&D Associate	_____	_____	_____
R&D Assistant	_____	_____	_____
R&D Intern	_____	_____	_____
R&D Technician	_____	_____	_____
R&D Paraprofessional	_____	_____	_____
Clerical	_____	_____	_____

Indicate major reasons for current vacancies, if any. \_\_\_\_\_

Indicate major reasons for losses, if any. \_\_\_\_\_

Indicate major reasons for additions, if any. \_\_\_\_\_

12. How many employees do you anticipate hiring in the next two years for each of the following levels? (If none, write "none" opposite the appropriate category).

<u>Personnel Categories</u>	<u>Number to be Hired</u>
Director and principal investigator	_____
R&D Associate	_____
R&D Assistant	_____
R&D Intern	_____
R&D Technician	_____
R&D Paraprofessional	_____
Clerical	_____

13. If your funding were to be increased by half (50% more than current funding) in the next year:

A. How many people would you need in addition to present staff and at what levels? (e.g., "3 R&D associates") \_\_\_\_\_

B. What kinds of skills would they represent? (e.g., proposal writing, statistical analysis) \_\_\_\_\_

14. Please list alphabetically all the personnel except clerical who work in the unit or on the project. Then follow the steps discussed on the following page for selecting personnel who will complete Questionnaire B.

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PLEASE USE THE LAST PAGE TO COMMENT ON THE QUESTIONNAIRE

PROCEDURE FOR SELECTING QUESTIONNAIRE B RESPONDENTS

After you have listed all personnel with the exception of those in clerical positions, four individuals should be chosen who will complete the Form B (Employee) Questionnaires. In order that a random group will be chosen, we ask that you follow the procedure shown below.

- Step #1      Starting with Number 1 for the first name on the list, number all remaining names consecutively.
- Step #2      Divide your total number of employees by four. This will give you a quotient, and a remainder in some instances.
- Step #3      Use the remainder as a means of locating the first individual to be selected, i.e., if the remainder is 3, count down to the third individual from the top of the list.

- Step #4      Use the quotient to select the remaining three people, i.e., if the quotient is two, take every second person after the initial person has been selected according to Step #3. In this case you would continue selecting every second person until three have been identified.

If you have four, or a lesser number on your staff, then all of them would be requested to complete the questionnaire.

For            Example #1

Example:      Staff size of 13 divided by four equals a quotient of 3, remainder of 1.

With a remainder of 1, the first name on the list is chosen initially. With a quotient of 3, count down to the third name below the one already chosen, or name #4 on the list. Continue taking every third name until a total of four have been selected.

Example #2

Staff size of 6 divided by 4 equals a quotient of 1, remainder of 2.

As the first step, select the second name on the list. Thereafter, take the next three consecutive names, since the quotient equals 1.

Comments on the Questionnaire

Since this questionnaire is being tested before preparation in its final form for use throughout the country with educational R-D-D-E personnel, your comments on its content and format are as valuable as the responses you have made. Please comment as frankly as you desire.

For each comment, please reference the page and item number so that we can make the appropriate changes (e.g., page\_\_\_\_, item\_\_\_\_, "could not understand the meaning of activity #\_\_\_\_"; or, page\_\_\_\_, item\_\_\_\_, "could not understand what I was supposed to do", and so on.

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## STUDY OF EDUCATIONAL RESEARCH, DEVELOPMENT, DIFFUSION, AND EVALUATION PERSONNEL TRAINING REQUIREMENTS

The Far West Laboratory for Educational Research and Development is developing a design for a study of training and personnel requirements of employers and employees engaged in educational research, development, diffusion, and evaluation (R-D-D-E). The intent of the study is to develop and justify more effective plans for the development and support of federally sponsored programs designed to respond to requirements for trained personnel (and training capabilities) in educational R-D-D-E. A "base-line" study, national in scope, technically adequate in design, and addressing itself to priority information requirements is needed.

In order to reduce the burden of response, sampling survey methods will be used to select a limited number of educational agencies and federally sponsored projects. We have selected your agency or project to pilot test the employer questionnaire. We are also requesting your cooperation in helping us to randomly sample the professional and paraprofessional staff in your agency or project who are engaged in educational R-D-D-E work, so that we may pilot test the employee questionnaires. Copies are enclosed for your examination. There are several alternate forms which have been designed to cover a wide range of R-D-D-E activities, without overburdening individual employees. All data on employers and employees will be treated confidentially and will be analyzed and reported only by aggregates (e.g. size of funding, type of R-D-D-E work, etc.).

Because relevant, accessible training programs and training materials are important to both employers and employees, we earnestly request your full cooperation. We are especially interested in your questions or comments which may help to improve the questionnaires.

Please write on the questionnaires themselves, enclose additional written comments and questions, or call Dr. Carl Rittenhouse at Stanford Research Institute, Area Code 415, 326-6200, Extension 3367.

PLEASE FILL OUT THIS QUESTIONNAIRE AS SOON AS YOU RECEIVE IT AND RETURN IT TO US IMMEDIATELY UPON COMPLETION.

### Definition of Educational Research

Educational Research is defined as a set of coordinated activities which produce reliable knowledge that can stand the test of empirical verification regarding new facts, principles, generalizations, theories, and laws. It employs the procedures of problem stating, design, measurement and analysis that permit known degrees of generalizability of findings, and that permit also replication for purposes of verification.

### Definition of Educational Development

Educational Development is defined as the systematic use of research-based generalizations to create new educational methods, systems, materials, or devices which have practical utility. Included in development are the design and production of prototype processes and materials and also pilot trials to test their feasibility and to gather ideas for their improvement. Development may be used to generate new curriculum materials, new teaching techniques, new types of media, new ways of assigning pupils to schools, new architectural designs and so on.

### Definition of Educational Diffusion

Educational Diffusion involves procedures which communicate about, or create, the necessary conditions for the adoption and utilization of products which derive from educational research and development.

### Definition of Educational Evaluation

Educational Evaluation is defined by those activities that are necessary for determining the effectiveness of educational programs, products or procedures. In its most rigorous form, evaluation will be concerned with obtaining objective measures of effectiveness under highly defined conditions, with the ultimate judgment to be made against standards or pre-established criteria. However, other procedures also may be used that yield informal measures such as collected opinions and ratings that will form the basis of evaluation.

### Definition of Educational Planning & Analysis

Educational Planning & Analysis includes those activities through which the goals of a system are defined and for which objectives are established that are considered to be feasible within operating constraints. Objectives are prioritized and the best available strategy is determined for their attainment. Expected versus actual outcomes may be evaluated by such rigorous techniques as economic, systems or psychometric analysis; or, observational techniques may be used also. Discrepancies arising may be treated by problem diagnosis in order to remove blocks to expected outcomes; or, feedback is provided to original planning to adjust preestablished objectives.

11-10-71

QUESTIONNAIRE A

Training and Personnel Requirements

R-D-D-E (Project Director Questionnaire)

Project Title \_\_\_\_\_

Project Director \_\_\_\_\_

Position Title \_\_\_\_\_

Address \_\_\_\_\_

Telephone \_\_\_\_\_

Agency Receiving Contract or Grant \_\_\_\_\_

Agency Director and Title \_\_\_\_\_

Address \_\_\_\_\_

Telephone \_\_\_\_\_

Sponsoring/Funding Agency \_\_\_\_\_

Agency Department \_\_\_\_\_

Project Officer \_\_\_\_\_

Primary Project Objective \_\_\_\_\_

Starting Date of Project \_\_\_\_\_

Ending Date of Project \_\_\_\_\_

Place a checkmark beside the type of organization in which the project resides:

<input type="checkbox"/> Educational R&D Center	<input type="checkbox"/> Public School or School District
<input type="checkbox"/> Regional Educational Laboratory	<input type="checkbox"/> State Department of Education
<input type="checkbox"/> College, School of Education, Dept. or other university office	<input type="checkbox"/> Professional Association
<input type="checkbox"/> Private non-profit organization	<input type="checkbox"/> Agency of Federal Government, Specify department _____
<input type="checkbox"/> Industry or commercial organization	
<input type="checkbox"/> Other (specify) _____	

Approximate level of project funding from all sources for current fiscal year \$ \_\_\_\_\_

Approximate level of project funding from all sources for last fiscal year \$ \_\_\_\_\_

Anticipated level of project funding from all sources next fiscal year \$ \_\_\_\_\_

Approximate percent of current fiscal year project funds from:

<input type="checkbox"/> % U.S. Office of Education
<input type="checkbox"/> % Office of Economic Opportunity
<input type="checkbox"/> % National Science Foundation
<input type="checkbox"/> % Other federal agencies (specify) _____
<input type="checkbox"/> % State (specify) _____
<input type="checkbox"/> % Private Foundation
<input type="checkbox"/> % Local School District
<input type="checkbox"/> % Industry
<input type="checkbox"/> % Other (specify) _____

PLEASE ASSURE THAT ABOVE PERCENTAGES ADD TO 100%.

1. In order to classify your project, which may involve several educational research, development, diffusion, evaluation or related planning and management tasks, please estimate the percent of current fiscal year project or unit effort which is being expended in the following areas. Show 0% if no effort in a given activity. Please read all items before answering.

1. \_\_\_\_\_ Conducting basic scientific inquiry related to educational problems.
2. \_\_\_\_\_ Conducting applied research studies directly related to educational problems.
3. \_\_\_\_\_ Investigating and assessing educational needs and requirements.
4. \_\_\_\_\_ Gathering and providing information for program planning and design.
5. \_\_\_\_\_ Locating and evaluating programs or procedures that may provide solutions to operating problems.
6. \_\_\_\_\_ Selecting, adapting or inventing solutions to operating problems.
7. \_\_\_\_\_ Developing prototypic packages (innovative solutions and programs) for educational programs.
8. \_\_\_\_\_ Testing and evaluating innovative solutions and programs.
9. \_\_\_\_\_ Revising and refining prototypic packages on the basis of test and evaluation information.
10. \_\_\_\_\_ Creating widespread awareness of tested solutions and programs.
11. \_\_\_\_\_ Demonstrating effectiveness of solutions and programs to target audiences.
12. \_\_\_\_\_ Training target audiences in the use of solutions and programs.
13. \_\_\_\_\_ Monitoring and adjusting solutions and programs after or during widespread installation.
14. \_\_\_\_\_ Planning and programming any of the above activities.

15. \_\_\_\_\_ Managing and supervising any of the above activities.
16. \_\_\_\_\_ Securing funding for, financially planning, and accounting for  
resources and expenditures of any of the above.
17. \_\_\_\_\_ Preparing reports, documentation, etc., on any of the above.
18. \_\_\_\_\_ Other (specify \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
19. \_\_\_\_\_ Training project/agency personnel to perform any of the above.  
Please list numbers of activities above to which training applies  
\_\_\_\_\_
20. \_\_\_\_\_ Training other than project/agency personnel to perform any of  
the above. Please list numbers of activities above to which  
training applies: \_\_\_\_\_  
Please also specify type of personnel: \_\_\_\_\_  
\_\_\_\_\_

PLEASE ASSURE THAT ABOVE PERCENTAGES ADD TO 100%.

2. Are there skills or sensitivities that have been particularly difficult to find in recruiting? Please describe.

3. Have you had difficulty in recruiting personnel with qualifications in specific content areas such as early childhood education, minority education, remedial reading, vocational education or others? Please specify areas.

4. Listed below are a number of recruiting procedures. First, place a checkmark in the left hand column by those you have used. Next, for each one that is checked, indicate degree of effectiveness by placing a checkmark in the appropriate column.

Recruiting Procedures	Have Used	Effectiveness of recruiting procedures		
		Minimally Effective	Moderately Effective	Very Effective
A. Journal or newspaper advertising	_____	_____	_____	_____
B. Professional meeting employment services	_____	_____	_____	_____
C. Referral by other employees	_____	_____	_____	_____
D. Colleges and university employment services	_____	_____	_____	_____
E. Informal survey of professional colleagues	_____	_____	_____	_____
F. Review of unsolicited applications	_____	_____	_____	_____
G. Recruitment from within	_____	_____	_____	_____
H. Other(specify) _____	_____	_____	_____	_____



5. Listed below are a number of selection techniques. First, place a checkmark in the left hand column by each technique you have used. Next, for each one that is checked, indicate degree of effectiveness by placing checkmark in the appropriate column.

Selection Techniques	Have Used	Effectiveness of Selection Techniques		
		Minimally Effective	Moderately Effective	Very Effective
A. Interviews	_____	_____	_____	_____
B. Tests	_____	_____	_____	_____
C. Application blanks	_____	_____	_____	_____
D. References	_____	_____	_____	_____
E. Work samples	_____	_____	_____	_____
F. Other (specify) _____	_____	_____	_____	_____

Please comment on any special problems in using the selection techniques.

6. Below is a list of personnel categories arranged by level of responsibility.

- Director or principal investigator  
Full responsibility for a program or a large scale project
- Research and Development Associate  
Full responsibility for medium size and smaller projects
- Research and Development Assistant  
Responsibility under supervision for some part of a project,  
such as for data collection and reduction
- Research and Development Intern  
Carries out assigned specific tasks under supervision
- Technician  
Carries out assigned specific tasks requiring limited  
technical skills under supervision
- Paraprofessional  
Carries out assigned specific tasks requiring little or no  
technical skill under supervision
- Clerical

Please complete the table below in accordance with the following instructions:

- Under Section A, indicate in the appropriate columns the number of individuals you employ and the number of full time equivalent (FTE) employees represented by those individuals. If none, write 0 in the space.
- Under Section B, indicate what in your opinion should be the minimum combination of education and experience requirements for each category by degree and by years of experience.
- Under Section C, place a checkmark (✓) opposite those categories for which your organization has established formal education and experience requirements. Then, for those you have checked, describe the requirements (e.g., Program Associate - minimum of Master's degree and 3 years of experience, and so forth) in the space provided below.

Personnel Categories	Section A		Section B		Section C
	Employees		Requirements in your Opinion		Organizational Requirements
	Number Employed	FTE	Degree	Years of Experience	Formal Requirements
Director and Principal Investigator	_____	_____	_____	_____	_____
R&D Associate	_____	_____	_____	_____	_____
R&D Assistant	_____	_____	_____	_____	_____
R&D Intern	_____	_____	_____	_____	_____
R&D Technician	_____	_____	_____	_____	_____
R&D Paraprofessional	_____	_____	_____	_____	_____
Clerical	_____	_____	_____	_____	_____

For describing formal requirements under Section C instructions. \_\_\_\_\_

7. How adequately has the previous training or experience of your employees prepared them for their present assignments? Place a checkmark (✓) opposite each personnel category and in the appropriate column that reflects your judgment of past experience or training.

Adequacy of Previous Training and Experience

Personnel Categories	Highly In- adequate	Inade- quate	Unde- cided	Adequate	Highly Adequate
R&D Associate	_____	_____	_____	_____	_____
R&D Assistant	_____	_____	_____	_____	_____
R&D Intern	_____	_____	_____	_____	_____
R&D Technician	_____	_____	_____	_____	_____
R&D Paraprofessional	_____	_____	_____	_____	_____
Clerical	_____	_____	_____	_____	_____

8. Listed below are several kinds of in-house employee training.  
Check those you have used during the past year.

<u>In-house Employee Training</u>	<u>Used During Past Year</u>
A. Special supervised OJT or internship	<input type="checkbox"/>
B. One to two week short courses	<input type="checkbox"/>
C. One to five day seminars or institutes	<input type="checkbox"/>
D. Longer courses	<input type="checkbox"/>
E. Other (specify) _____	<input type="checkbox"/>
_____	

For those you checked above, briefly indicate the number of times it was offered, the percent of your employees who were enrolled, the time required and a description of the content including course titles if possible (e.g., two week course in Tests and Measurements, 3 hours per day, 25% of the staff enrolled, offered 4 times during past year). \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

9. Listed below are 30 activities that are performed in educational R-D-D-E. Under Section A, indicate the need for additional training for your employees. Place a checkmark in the appropriate column opposite each activity. Under Section B, identify five activities for which you would like to have programmed instruction or other self-study materials developed. Next, rank the five activities you have selected from "1" to "5", with Rank "1" going to the one with your highest preference, Rank "2" to your next highest preference and so forth.

Educational R-D-D-E Activities	Need for Training			Materials Desired	
	Section A			Section B	
	Little or no need	Moderate need	Great need	Rank of activities for which training materials are desired	
1. Interpreting, evaluating and synthesizing relevant literature	_____	_____	_____	_____	
2. Identifying and delineating significant researchable problems	_____	_____	_____	_____	
3. Choosing specific research variables and treatments (where appropriate) to be used	_____	_____	_____	_____	
4. Developing measuring instruments	_____	_____	_____	_____	
5. Using a variety of data-gathering methods (tests, interviews, analysis of documents, etc.)	_____	_____	_____	_____	
6. Organizing data for analysis	_____	_____	_____	_____	
7. Understanding the general role, types, and assumptions underlying various statistical techniques, and drawing on such knowledge in selecting and using appropriate techniques of data analysis	_____	_____	_____	_____	

Educational R-D-D-E Activities	Need for Training			Materials Desired
	Section A			Section B
	Little or no need	Moderate need	Great need	Rank of activities for which training materials are desired
8. Using aids in data analysis, such as computer processing	_____	_____	_____	_____
9. Interpreting and drawing appropriate conclusions and implications from data analyses	_____	_____	_____	_____
10. Reporting research findings and implications, orally and in writing	_____	_____	_____	_____
11. Specifying desired performance outcomes (objectives) of instruction	_____	_____	_____	_____
12. Describing a product to be developed	_____	_____	_____	_____
13. Designing and managing field tryouts and tests	_____	_____	_____	_____
14. Specifying requirements for product revision based upon outcome evaluation	_____	_____	_____	_____
15. Selecting the most effective dissemination vehicles to convey information to target groups	_____	_____	_____	_____
16. Composing the information, within a chosen format, for accurate and pervasive dissemination	_____	_____	_____	_____

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Educational R-D-D-E Activities	Need for Training			Materials Desired
	Section A			Section B
	Little or no need	Moderate need	Great need	Rank of activities for which training materials are desired
17. Implementing actual dissemination, including the direction of technical production personnel	_____	_____	_____	_____
18. Identifying goals of an educational system	_____	_____	_____	_____
19. Clarifying and explicating desired outcomes of an educational system	_____	_____	_____	_____
20. Comparing actual and intended educational system outcomes to identify discrepancies (needs) which exist in the system	_____	_____	_____	_____
21. Designing a monitoring system that will provide continual data on the status of an operating educational system	_____	_____	_____	_____
22. Helping educational system personnel to establish priorities for selected system objectives	_____	_____	_____	_____
23. Identifying and rating alternative strategies for attaining selected educational system objectives	_____	_____	_____	_____
24. Identifying and rating available educational program resources (human, material and financial) and/or potential sources of support	_____	_____	_____	_____
25. Writing proposals for research, development, dissemination and/or evaluation projects	_____	_____	_____	_____

Educational R-D-D-E Activities	Need for Training			Materials Desired
	Section A			Section B
	Little or no need	Moderate need	Great need	Rank of activities for which training materials are desired
26. Monitoring educational programs to detect deviations from design or specified procedures through techniques such as unobtrusive measures, systems analysis, and observational techniques	—	—	—	—
27. Developing general criteria and designing data collection procedures for application in measuring the effectiveness and efficiency of existing innovative practices and products, i.e., minimum standards and outcomes which indicate successful utilization of practices and products	—	—	—	—
28. If necessary, translating program objectives into behavioral terms	—	—	—	—
29. Establishing standards or norms for judging whether objectives have been attained	—	—	—	—
30. Selecting (or developing) and using techniques of measurement to yield information relevant to standards to be used	—	—	—	—



10. How much value do you place on the following training approaches for current employees?  
Place a check mark in the appropriate "value" column

Training Approaches	Value of Approach		
	Little or no value	Moderate Value	Great Value
A. Three to five day institutes or seminars	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Longer institutes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. One to two week short courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Longer courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Internships in other agencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Correspondence courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Extension or other course arrangements with colleges or universities on a released time basis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Extension or other course arrangements with colleges or universities on an employee's own time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Indicate for each personnel category the number of currently unfilled positions, the number of losses in the last year and the number of personnel added in the last year. (If none, write "none" opposite the appropriate category.)

<u>Personnel Categories</u>	<u>Number current unfilled positions</u>	<u>Number losses in last year</u>	<u>Number additions in last year</u>
Director and Principal Investigator	_____	_____	_____
R&D Associate	_____	_____	_____
R&D Assistant	_____	_____	_____
R&D Intern	_____	_____	_____
R&D Technician	_____	_____	_____
R&D Paraprofessional	_____	_____	_____
Clerical	_____	_____	_____

Indicate major reasons for current vacancies, if any. \_\_\_\_\_

Indicate major reasons for losses, if any. \_\_\_\_\_

Indicate major reasons for additions, if any. \_\_\_\_\_

12. How many employees do you anticipate hiring in the next two years for each of the following levels? (If none, write "none" opposite the appropriate category).

<u>Personnel Categories</u>	<u>Number to be Hired</u>
Director and principal investigator	_____
R&D Associate	_____
R&D Assistant	_____
R&D Intern	_____
R&D Technician	_____
R&D Paraprofessional	_____
Clerical	_____

13. If your funding were to be increased by half (50% more than current funding) in the next year:

A. How many people would you need in addition to present staff and at what levels? (e.g., "3 R&D associates") \_\_\_\_\_

B. What kinds of skills would they represent? (e.g., proposal writing, statistical analysis) \_\_\_\_\_

14. Please list alphabetically all the personnel except clerical who work in the unit or on the project. Then follow the steps discussed on the following page for selecting personnel who will complete Questionnaire B.

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PLEASE USE THE LAST PAGE TO COMMENT ON THE QUESTIONNAIRE

PROCEDURE FOR SELECTING QUESTIONNAIRE B RESPONDENTS

After you have listed all personnel with the exception of those in clerical positions, four individuals should be chosen who will complete the Form B (Employee) Questionnaires. In order that a random group will be chosen, we ask that you follow the procedure shown below.

- Step #1      Starting with Number 1 for the first name on the list, number all remaining names consecutively.
- Step #2      Divide your total number of employees by four. This will give you a quotient, and a remainder in some instances.
- Step #3      Use the remainder as a means of locating the first individual to be selected, i.e., if the remainder is 3, count down to the third individual from the top of the list.
- Step #4      Use the quotient to select the remaining three people, i.e., if the quotient is two, take every second person after the initial person has been selected according to Step #3. In this case you would continue selecting every second person until three have been identified.
- If you have four, or a lesser number on your staff, then all of them would be requested to complete the questionnaire.

For            Example #1

Example:      Staff size of 13 divided by four equals a quotient of 3, remainder of 1.

              With a remainder of 1, the first name on the list is chosen initially. With a quotient of 3, count down to the third name below the one already chosen, or name #4 on the list. Continue taking every third name until a total of four have been selected.

Example #2

              Staff size of 6 divided by 4 equals a quotient of 1, remainder of 2.

              As the first step, select the second name on the list. Thereafter, take the next three consecutive names, since the quotient equals 1.

### Comments on the Questionnaire

Since this questionnaire is being tested before preparation in its final form for use throughout the country with educational R-D-D-E personnel, your comments on its content and format are as valuable as the responses you have made. Please comment as frankly as you desire.

For each comment, please reference the page and item number so that we can make the appropriate changes (e.g., page\_\_\_\_, item\_\_\_\_, "could not understand the meaning of activity #\_\_\_\_"; or, page\_\_\_\_, item\_\_\_\_, "could not understand what I was supposed to do", and so on.

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SURVEY OF EDUCATION PERSONNEL IN RESEARCH,  
DEVELOPMENT, DIFFUSION AND EVALUATION ACTIVITIES

To the Respondent:

The attached Questionnaire B is under development in connection with a survey of the demand for Research Development, Diffusion and Evaluation personnel in Education. You have been identified by your supervisor as one who engages in one or more of these activities. We are asking for your cooperation in filling out the questionnaire and in giving us any comments you may want to make concerning its format and wording and the general answerability of the questions with reference to your work activities and your education and experience.

When you have completed the questionnaire and your comments, please return them to us in the attached stamped, self-addressed envelope.

Your cooperation is greatly appreciated.

Sincerely,

*Carl H. Rittenhouse*

Carl H. Rittenhouse  
Senior Research Psychologist

enclosures  
questionnaire  
return envelope

PLEASE FILL OUT THIS QUESTIONNAIRE AS SOON AS YOU RECEIVE IT AND RETURN IT TO US IMMEDIATELY UPON COMPLETION.

Questionnaire B

Project Code No.

Name(optional) \_\_\_\_\_

Please indicate the complete title of the project or activity on which you are currently working. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Write your job title or position \_\_\_\_\_

How long have you worked in present job?

Number of years \_\_\_\_\_ Number of months if less than one year \_\_\_\_\_

How many people do you supervise in this capacity? \_\_\_\_\_

Briefly describe what you do on this job. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sex	Check the appropriate age category		Actual Annual Salary	
			Under \$3,000	\$18,000 - \$20,999
Male	Under 25	45 - 49	\$ 3,000 - \$ 5,999	\$21,000 - \$23,999
Female	25 - 29	50 - 54	\$ 6,000 - \$ 8,999	\$24,000 - \$26,999
	30 - 34	55 - 59	\$ 9,000 - \$11,999	\$27,000 - \$29,999
	35 - 39	60 - 64	\$12,000 - \$14,999	\$30,000 or more
	40 - 44	Over 64	\$15,000 - \$17,999	

If less than full time, indicate approximate fraction of full time that you work, e.g., 1/4, 1/2, etc. \_\_\_\_\_.

Check the highest level of formal education you have obtained.

- \_\_\_\_ High school with no college level course work  
\_\_\_\_ High school and some college courses, but do not have a degree or certificate yet. Number of years completed \_\_\_\_\_  
\_\_\_\_ Two years of college completed with a degree or certificate  
\_\_\_\_ Bachelors degree  
\_\_\_\_ Masters degree  
\_\_\_\_ Doctorate or Post-doctoral degree  
\_\_\_\_ Other professional degree, specify type \_\_\_\_\_



1. On the following pages is a list of activities that may be performed by those working in educational research, development, diffusion and/or evaluation. We understand that your current project work falls appropriately under one or more of those general descriptive headings. The more detailed list of activities or skills given below includes some items that fall under each of the general headings, but for the purposes of this question, it is only important that you respond to each individual item in terms of your present activity without regard to its possible placement under one of the more general area descriptions. Some of the activities in which you engage on your present job may not be included in the list. In order to avoid putting an excessive burden of time and effort on any respondent in completing the questionnaire, a longer, comprehensive list was divided into several parts. You need concern yourself only with the items on this list. Other respondents will respond to other items so as to obtain complete coverage.

Please respond to the activities in the following way:

First, read the activity description, then in Section A, indicate the degree to which you are now involved in it by placing a check mark in the appropriate column.

In Section B, indicate how you acquired the skills involved in the activity i.e., through formal training, or experience on the job, or through a combination of both. However, if you have not acquired the skills for the activity place a check mark in the first column of Section B and leave the remaining columns of Section B blank.

In Section C, show the extent to which you feel a need for further training in skills associated with the activity, regardless of how you answered it in the preceding Section B.

At the top of the table is an example of how a person might respond to the example item of "Developing measuring instruments." This individual indicated "moderate involvement" in the activity, felt that he had acquired the necessary skills mainly through "job experience" and finally, saw a "great need" for additional training in the associated skills.

## Section A

R-D-D-E ACTIVITIES

Example: Developing measuring instruments

	Involvement in Activities			
	Little or No Involvement	Moderate Involvement	Heavy Involvement	Have Not Acquired Skills
		<u>X</u>		
1. Drawing research implications from results of prior research studies	_____	_____	_____	_____
2. Identifying and delineating significant researchable problems	_____	_____	_____	_____
3. Specifying data or evidence necessary for a rigorous test of an hypothesis	_____	_____	_____	_____
4. Understanding experimental, quasi-experimental, and other systematic approaches to inquiry, and drawing on such knowledge in designing a research study appropriate to the problem under consideration	_____	_____	_____	_____
5. Selecting appropriate techniques of measurement	_____	_____	_____	_____
6. Organizing data for analysis	_____	_____	_____	_____
7. Interpreting and drawing appropriate conclusions and implications from data analyses	_____	_____	_____	_____
8. Reporting research findings and implications, orally and in writing	_____	_____	_____	_____
9. Specifying desired performance outcomes (objectives) of instruction	_____	_____	_____	_____
10. Devising techniques to identify entry capabilities of learners	_____	_____	_____	_____
11. Describing a product to be developed	_____	_____	_____	_____
12. Directing the work of materials production personnel	_____	_____	_____	_____
13. Reporting evaluation of outcomes	_____	_____	_____	_____
14. Selecting from all available information about developed product packages that which can be most effectively disseminated	_____	_____	_____	_____
15. Selecting the most effective dissemination vehicles to convey information to target groups	_____	_____	_____	_____

## Section B

## Section C

[illegible]

## Section A

### Involvement in Activities

## R-D-D-E ACTIVITIES

16. Implementing actual dissemination, including the direction of technical production personnel	_____	_____	_____	_____
17. Selecting appropriate setting and personnel for a product demonstration	_____	_____	_____	_____
18. Designing modifications of a product to fit the adopting organization or system, when necessary	_____	_____	_____	_____
19. Identifying goals of an educational system	_____	_____	_____	_____
20. Clarifying and explicating desired outcomes of an educational system	_____	_____	_____	_____
21. Helping educational system personnel to develop objectives which, if attained, will solve the problems resulting from discrepancies between actual and intended system outcomes	_____	_____	_____	_____
22. Identifying and rating alternative strategies for attaining the selected educational system objectives	_____	_____	_____	_____
23. Identifying and rating available educational program resources (human, material, and financial) and/or potential sources of support	_____	_____	_____	_____
24. Selecting a strategy for educational program implementation	_____	_____	_____	_____
25. Writing proposals for research, development, dissemination and/or evaluation projects	_____	_____	_____	_____
26. Providing immediate feedback to educational program operators for their possible use in making decisions about modifications of plans, procedures, or resource allocations	_____	_____	_____	_____
27. Developing general criteria and designing data collection procedures for application in measuring the effectiveness and efficiency of existing innovative practices and products, i.e., minimum standards and outcomes which indicate successful utilization of practices and products	_____	_____	_____	_____

## Section C

### Need for Additional Training in Associated Skills

[illegible]

R-D-D-E ACTIVITIES

Section A

	Involvement in Activities				How
	Little or No Involve- ment	Moderate Involve- ment	Heavy Involve- ment	Have Not Acquired Skills	Mo. Th. Fo Edu : Tra
28. Identifying situations in which designated behavior can be observed and recorded	_____	_____	_____	_____	_____
29. Selecting (or developing) and using techniques of measurement to yield information relevant to standards to be used	_____	_____	_____	_____	_____
30. Selecting an appropriate technique to analyze data	_____	_____	_____	_____	_____
31. Deciding what recommendations to make as a result of outcomes	_____	_____	_____	_____	_____

Section B				Section C		
How Skills Were Acquired				Need for Additional Training in Associated Skills		
Have Not Acquired Skills	Mostly Through Formal Education and Training	Mostly Through Experience on the Job	About Equally Through a Combination of Both	Little or No Additional Need	Moderate Need	Great Need for Additional Training
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

2. A number of educational areas are listed below. For each of the areas, please indicate the approximate amount of formal course work, graduate or undergraduate, you have completed by placing a checkmark in the appropriate column. If you have had no course work in the area, place the checkmark in the "none" column.

Educational Areas	Number of Courses			
	None (0)	Few (1 or 2)	Several (3 to 5)	Many (6 or more)
1. Statistics	—	—	—	—
2. Learning theory	—	—	—	—
3. Social Psychology	—	—	—	—
4. Audio-Visual Education	—	—	—	—
5. Marketing	—	—	—	—
6. Sociology	—	—	—	—
7. Research design	—	—	—	—
8. Testing and measurement	—	—	—	—
9. Systems theory	—	—	—	—
10. Advertising	—	—	—	—
11. Educational administration	—	—	—	—
12. Political science	—	—	—	—
13. Philosophy of science	—	—	—	—
14. Data processing	—	—	—	—
15. Theories of teaching	—	—	—	—
16. Curriculum development	—	—	—	—
17. Communication theory	—	—	—	—
18. Decision theory	—	—	—	—
19. Information theory	—	—	—	—
20. Journalism	—	—	—	—
21. Anthropology	—	—	—	—
22. Other (specify)	—	—	—	—

Circle the three areas from those listed that are most important for your current work, whether or not you have had course work in those areas

3. Since you have been employed in this field how much of the following kinds of training relevant to educational research, development, diffusion, or evaluation have you had? Indicate by placing a check mark in the appropriate column after each kind of training

Type of Training	Amount of Training			
	None	Very little	Moderate	Extensive
Special supervised on the job training or internship				
In-service courses				
Other (specify)				



4. Below is a list of types of employers.

In Section A, indicate the number of years you have been employed by each of the types of employers. If none, write "none" in the space.

In Section B, indicate the relevance of each type of previous employment to your present job by placing a checkmark in the appropriate column. If you have no previous experience put a check mark here \_\_\_\_\_, and go to the next item.

<u>Previous Employers</u>	Section A	Section B		
	Number of years	Relevance to present job		
		Low	Moderate	High
College or university				
Educational R-D-D-E organizations				
Government				
Business and/or industry				
Other (specify _____)				

5. Indicate any skills you have in educational or R-D-D-E areas that you do not use in your present job. \_\_\_\_\_

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6. To what extent are you satisfied with your present job? Place a checkmark below in the appropriate category.

Completely Satisfied	Satisfied	Undecided	Dissatisfied	Completely Dissatisfied
_____	_____	_____	_____	_____

7. To what extent are there advancement possibilities in your present job?  
Place a checkmark below the appropriate category.

Highly Probable                      Probable                      Unknown                      Improbable                      Highly Improbable

\_\_\_\_\_

8. Below is a list of types of training or training materials. Indicate the value you place upon each type either to meet current job requirements or advancement plans by placing a checkmark in the appropriate column after each type.

<u>Types of additional training</u>	<u>Little or no value</u>	<u>Some value</u>	<u>Great value</u>
A. Programmed instruction materials for your own use	_____	_____	_____
B. Three to five day institutes	_____	_____	_____
C. Longer institutes	_____	_____	_____
D. One or two week university short courses	_____	_____	_____
E. Correspondence courses	_____	_____	_____
F. Extension courses	_____	_____	_____
G. Other (specify)	_____	_____	_____

9. How important do you feel it is to receive college credit for any additional training you might obtain? Indicate by placing a checkmark below the appropriate category.

Extremely Important                      Important                      Undecided                      Unimportant                      Completely Unimportant

\_\_\_\_\_

If you checked "important" or "extremely important", please give your reasons

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PLEASE USE THE NEXT PAGE TO COMMENT ON THE QUESTIONNAIRE.

### Comments on the Questionnaire

Since this questionnaire is being tested before preparation in its final form for use throughout the country with educational R-D-D-E personnel, your comments on its content and format are as valuable as the responses you have made. Please comment as frankly as you desire.

For each comment, please reference the page and item number so that we can make the appropriate changes (e.g., page\_\_\_\_, item\_\_\_\_, "could not understand the meaning of activity #\_\_\_\_"; or, page\_\_\_\_, item\_\_\_\_, "could not understand what I was supposed to do", and so on.

1. Introduction  
 2. Background  
 3. Methodology  
 4. Results  
 5. Discussion  
 6. Conclusion  
 7. References  
 8. Appendix  
 9. Index  
 10. Glossary  
 11. Abbreviations  
 12. Footnotes  
 13. Tables  
 14. Figures  
 15. Equations  
 16. Formulas  
 17. Diagrams  
 18. Charts  
 19. Maps  
 20. Tables  
 21. Figures  
 22. Equations  
 23. Formulas  
 24. Diagrams  
 25. Charts  
 26. Maps  
 27. Tables  
 28. Figures  
 29. Equations  
 30. Formulas  
 31. Diagrams  
 32. Charts  
 33. Maps  
 34. Tables  
 35. Figures  
 36. Equations  
 37. Formulas  
 38. Diagrams  
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 248. Diagrams  
 249. Charts  
 250. Maps  
 251. Tables  
 252. Figures  
 253. Equations  
 254.

SURVEY OF EDUCATION PERSONNEL IN RESEARCH,  
DEVELOPMENT, DIFFUSION AND EVALUATION ACTIVITIES

To the Respondent:

The attached Questionnaire B is under development in connection with a survey of the demand for Research Development, Diffusion and Evaluation personnel in Education. You have been identified by your supervisor as one who engages in one or more of these activities. We are asking for your cooperation in filling out the questionnaire and in giving us any comments you may want to make concerning its format and wording and the general answerability of the questions with reference to your work activities and your education and experience.

When you have completed the questionnaire and your comments, please return them to us in the attached stamped, self-addressed envelope.

Your cooperation is greatly appreciated.

Sincerely,

*Carl H. Rittenhouse*

Carl H. Rittenhouse  
Senior Research Psychologist

enclosures  
questionnaire  
return envelope

PLEASE FILL OUT THIS QUESTIONNAIRE AS SOON AS YOU RECEIVE  
IT AND RETURN IT TO US IMMEDIATELY UPON COMPLETION

Questionnaire B

Project Code No. \_\_\_\_\_

Name (optional) \_\_\_\_\_

Please indicate the complete title of the project or activity on which you are currently working. \_\_\_\_\_

Write your job title or position \_\_\_\_\_

How long have you worked in present job?

Number of years \_\_\_\_\_ Number of months if less than one year \_\_\_\_\_

How many people do you supervise in this capacity? \_\_\_\_\_

Briefly describe what you do on this job. \_\_\_\_\_

Sex	Check the appropriate age category		Actual Annual Salary		
<input type="checkbox"/> Male	<input type="checkbox"/> Under 20	<input type="checkbox"/> 45 - 49	<input type="checkbox"/> Under \$3,000	<input type="checkbox"/> \$18,000 - \$20,999	
<input type="checkbox"/> Female	<input type="checkbox"/> 25 - 29	<input type="checkbox"/> 50 - 54	<input type="checkbox"/> \$ 3,000 - \$ 5,999	<input type="checkbox"/> \$21,000 - \$23,999	
	<input type="checkbox"/> 30 - 34	<input type="checkbox"/> 55 - 59	<input type="checkbox"/> \$ 6,000 - \$ 8,999	<input type="checkbox"/> \$24,000 - \$26,999	
	<input type="checkbox"/> 35 - 39	<input type="checkbox"/> 60 - 64	<input type="checkbox"/> \$ 9,000 - \$ 11,999	<input type="checkbox"/> \$27,000 - \$29,999	
	<input type="checkbox"/> 40 - 44	<input type="checkbox"/> Over 64	<input type="checkbox"/> \$ 12,000 - \$ 14,999	<input type="checkbox"/> \$30,000 or more	
			<input type="checkbox"/> \$ 15,000 - \$ 17,999		

If less than full time, indicate approximate fraction of full time that you work, e.g., 1/4, 1/2, \_\_\_\_\_

Check the highest level of formal education you have obtained.

- ☐ High school with no college level course work
- ☐ High school and some college courses, but do not have a degree or certificate yet. Number of years completed \_\_\_\_\_
- ☐ Two years of college completed with a degree or certificate
- ☐ Bachelors degree
- ☐ Masters degree
- ☐ Doctorate or Post-doctoral degree
- ☐ Other professional degree, specify type \_\_\_\_\_

1. On the following pages is a list of activities that may be performed by those working in educational research, development, diffusion and/or evaluation. We understand that your current project work falls appropriately under one or more of those general descriptive headings. The more detailed list of activities or skills given below includes some items that fall under each of the general headings, but for the purposes of this question, it is only important that you respond to each individual item in terms of your present activity without regard to its possible placement under one of the more general area descriptions. Some of the activities in which you engage on your present job may not be included in the list. In order to avoid putting an excessive burden of time and effort on any respondent in completing the questionnaire, a longer, comprehensive list was divided into several parts. You need concern yourself only with the items on this list. Other respondents will respond to other items so as to obtain complete coverage.

Please respond to the activities in the following way:

First, read the activity description, then in Section A, indicate the degree to which you are now involved in it by placing a check mark in the appropriate column.

In Section B, indicate how you acquired the skills involved in the activity i.e., through formal training, or experience on the job, or through a combination of both. However, if you have not acquired the skills for the activity place a check mark in the first column of Section B and leave the remaining columns of Section B blank.

In Section C, show the extent to which you feel a need for further training in skills associated with the activity, regardless of how you answered it in the preceding Section B.

At the top of the table is an example of how a person might respond to the example item of "Developing measuring instruments." This individual indicated "moderate involvement" in the activity, felt that he had acquired the necessary skills mainly through "job experience" and finally, saw a "great need" for additional training in the associated skills.

## Section A

R-D-D-E ACTIVITIES

Example: Developing measuring instruments

1. Identifying and delineating significant researchable problems
2. Procuring and/or managing resources (material and human) necessary to reach research objectives
3. Identifying a population to which results should be generalized and a sample representative of that population, using appropriate sampling techniques to draw the sample
4. Applying a research design, recognizing, explicating and controlling threats to validity
5. Developing measuring instruments
6. Understanding the general role, types, and assumptions underlying various statistical techniques, and drawing on such knowledge in selecting and using appropriate techniques of data analysis
7. Interpreting and drawing appropriate conclusions and implications from data analyses
8. Interpreting information concerning education goals
9. Specifying desired performance outcomes (objectives) of instruction
10. Identifying alternative instructional and media techniques
11. Describing a product to be developed
12. Selecting or devising appropriate techniques for measuring outcomes
13. Interpreting evaluation findings
14. Selecting the most effective dissemination vehicles, to convey information to target groups

Section A				
Involvement in Activities				
Little or No Involvement	Moderate Involvement	Heavy Involvement	Have Not Acquired Skills	
	X			
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
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_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

## Section B

## Section C

[illegible]



### R-D-D-E ACTIVITIES

15. Composing the information, within a chosen format, for accurate and pervasive dissemination
16. Implementing actual dissemination, including the direction of technical production personnel
17. Managing and coordinating a product demonstration effort
18. Designing procedures for modifying the adopting system or organization to fit a product, when necessary, including the design of needed training programs
19. Assessing the social relevance of the goals of an educational system
20. Measuring current actual outcomes of an educational system through techniques such as:
  - a. demographic analysis
  - b. economic analysis
  - c. psychometric analysis
  - d. systems analysis
  - e. observational techniques
21. Designing a monitoring system that will provide continual data on the status of an operating educational system
22. Identifying and rating alternative strategies for attaining the selected educational system objectives
23. Identifying and rating available educational program resources (human, material, and financial) and/or potential sources of support
24. Selecting a source of support or the available resources which will be used to implement an educational program

### Section A

Involvement in Activities				
Little or No Involvement	Moderate Involvement	Heavy Involvement	Have Not Acquired Skills	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
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_____	_____	_____	_____	
_____	_____	_____	_____	

## Section B

## Section C

[illegible]

# Section A

## R-D-D-E ACTIVITIES

25. Designing and selecting indicators of progress in educational programs
26. Perceiving human relation problems that threaten the success of educational programs
27. Developing general criteria and designing data collection procedures for application in measuring the effectiveness and efficiency of existing innovative practices and products, i.e., minimum standards and outcomes which indicate successful utilization of practices and products
28. Establishing standards or norms for judging whether objectives have been attained
29. Selecting (or developing) and using techniques of measurement to yield information relevant to standards to be used
30. Analyzing the evidence yielded by an evaluation
31. Estimating the potential impact of outcomes on the problem area being served

Involvement in Activities			How S	
Little or No Involvement	Moderate Involvement	Heavy Involvement	Have Not Acquired Skills	Most Through Formal Education and Training
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Section B

Section C

How Skills Were Acquired				Need for Additional Training in Associated Skills		
Have Not Acquired Skills	Mostly Through Formal Education and Training	Mostly Through Experience on the Job	About Equally Through a Combination of both	Little or No Additional Need	Moderate Need	Great Need for Additional Training
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—

2. A number of educational areas are listed below. For each of the areas, please indicate the approximate amount of formal course work, graduate or undergraduate, you have completed by placing a checkmark in the appropriate column. If you have had no course work in the area, place the checkmark in the "none" column.

Educational Areas	Number of Courses			
	None (0)	Few (1 or 2)	Several (3 to 5)	Many (6 or more)
1. Statistics	—	—	—	—
2. Learning theory	—	—	—	—
3. Social Psychology	—	—	—	—
4. Audio-Visual Education	—	—	—	—
5. Marketing	—	—	—	—
6. Sociology	—	—	—	—
7. Research design	—	—	—	—
8. Testing and measurement	—	—	—	—
9. Systems theory	—	—	—	—
10. Advertising	—	—	—	—
11. Educational administration	—	—	—	—
12. Political science	—	—	—	—
13. Philosophy of science	—	—	—	—
14. Data processing	—	—	—	—
15. Theories of teaching	—	—	—	—
16. Curriculum development	—	—	—	—
17. Communication theory	—	—	—	—
18. Decision theory	—	—	—	—
19. Information theory	—	—	—	—
20. Journalism	—	—	—	—
21. Anthropology	—	—	—	—
22. Other (specify)	—	—	—	—

Circle the three areas from those listed that are most important for your current work, whether or not you have had course work in those areas

3. Since you have been employed in this field how much of the following kinds of training relevant to educational research, development, diffusion, or evaluation have you had? Indicate by placing a check mark in the appropriate column after each kind of training

Type of Training	Amount of Training			
	None	Very little	Moderate	Extensive
Special supervised on the job training or internship				
In-service courses				
Other(specify)				

4. Below is a list of types of employers.

In Section A, indicate the number of years you have been employed by each of the types of employers. If none, write "none" in the space.

In Section B, indicate the relevance of each type of previous employment to your present job by placing a checkmark in the appropriate column.

- If you have no previous experience put a check mark here \_\_\_\_\_, and go to the next item.

<u>Previous Employers</u>	<u>Section A</u>	<u>Section B</u> Relevance to present job		
	Number of years	Low	Moderate	High
College or university				
Educational R-D-D-E organizations				
Government				
Business and/or industry				
Other (specify _____)				

5. Indicate any skills you have in educational or R-D-D-E areas that you do not use in your present job. \_\_\_\_\_

\_\_\_\_\_

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6. To what extent are you satisfied with your present job? Place a checkmark below in the appropriate category.

Completely Satisfied	Satisfied	Undecided	Dissatisfied	Completely Dissatisfied
_____	_____	_____	_____	_____

7. To what extent are there advancement possibilities in your present job?

Place a checkmark below the appropriate category.

Highly Probable	Probable	Unknown	Improbable	Highly Improbable
_____	_____	_____	_____	_____

8. Below is a list of types of training or training materials. Indicate the value you place upon each type either to meet current job requirements or advancement plans by placing a checkmark in the appropriate column after each type.

<u>Types of additional training</u>	<u>Little or no value</u>	<u>Some value</u>	<u>Great value</u>
A. Programmed instruction materials for your own use	_____	_____	_____
B. Three to five day institutes	_____	_____	_____
C. Longer institutes	_____	_____	_____
D. One or two week university short courses	_____	_____	_____
E. Correspondence courses	_____	_____	_____
F. Extension courses	_____	_____	_____
G. Other (specify)	_____	_____	_____

9. How important do you feel it is to receive college credit for any additional training you might obtain? Indicate by placing a checkmark below the appropriate category.

<u>Extremely Important</u>	<u>Important</u>	<u>Undecided</u>	<u>Unimportant</u>	<u>Completely Unimportant</u>
_____	_____	_____	_____	_____

If you checked "important" or "extremely important", please give your reasons

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PLEASE USE THE NEXT PAGE TO COMMENT ON THE QUESTIONNAIRE.

Since this questionnaire is being tested before preparation in its final form for use throughout the country with educational R-D-D-E personnel, your comments on its content and format are as valuable as the responses you have made. Please comment as frankly as you desire.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.



SURVEY OF EDUCATION PERSONNEL IN RESEARCH,  
DEVELOPMENT, DIFFUSION AND EVALUATION ACTIVITIES

To the Respondent:

The attached Questionnaire B is under development in connection with a survey of the demand for Research Development, Diffusion and Evaluation personnel in Education. You have been identified by your supervisor as one who engages in one or more of these activities. We are asking for your cooperation in filling out the questionnaire and in giving us any comments you may want to make concerning its format and wording and the general answerability of the questions with reference to your work activities and your education and experience.

When you have completed the questionnaire and your comments, please return them to us in the attached stamped, self-addressed envelope.

Your cooperation is greatly appreciated.

Sincerely,

*Carl H. Rittenhouse*

Carl H. Rittenhouse  
Senior Research Psychologist

enclosures  
questionnaire  
return envelope

PLEASE FILL OUT THIS QUESTIONNAIRE AS SOON AS YOU RECEIVE  
IT AND RETURN IT TO US IMMEDIATELY UPON COMPLETION.

Questionnaire B

Project Code No.

Name(optional) \_\_\_\_\_

Please indicate the complete title of the project or activity on which you are currently working. \_\_\_\_\_

Write your job title or position \_\_\_\_\_

How long have you worked in present job?

Number of years \_\_\_\_\_ Number of months if less than one year \_\_\_\_\_

How many people do you supervise in this capacity? \_\_\_\_\_

Briefly describe what you do on this job. \_\_\_\_\_

Sex	Check the appropriate age category		Actual Annual Salary	
<input type="checkbox"/> Male	<input type="checkbox"/> Under 20	<input type="checkbox"/> 45 - 49	<input type="checkbox"/> Under \$3,000	<input type="checkbox"/> \$18,000 - \$20,999
<input type="checkbox"/> Female	<input type="checkbox"/> 25 - 29	<input type="checkbox"/> 50 - 54	<input type="checkbox"/> \$ 3,000 - \$ 5,999	<input type="checkbox"/> \$21,000 - \$23,999
	<input type="checkbox"/> 30 - 34	<input type="checkbox"/> 55 - 59	<input type="checkbox"/> \$ 6,000 - \$ 8,999	<input type="checkbox"/> \$24,000 - \$26,999
	<input type="checkbox"/> 35 - 39	<input type="checkbox"/> 60 - 64	<input type="checkbox"/> \$ 9,000 - \$ 11,999	<input type="checkbox"/> \$27,000 - \$29,999
	<input type="checkbox"/> 40 - 44	<input type="checkbox"/> Over 64	<input type="checkbox"/> \$ 12,000 - \$ 14,999	<input type="checkbox"/> \$30,000 or more
			<input type="checkbox"/> \$ 15,000 - \$ 17,999	

If less than full time, indicate approximate fraction of full time that you work, e.g., 1/4, 1/2, \_\_\_\_\_

Check the highest level of formal education you have obtained.

- ☐ High school with no college level course work
- ☐ High school and some college courses, but do not have a degree or certificate yet. Number of years completed \_\_\_\_\_
- ☐ Two years of college completed with a degree or certificate
- ☐ Bachelors degree
- ☐ Masters degree
- ☐ Doctorate or Post-doctoral degree
- ☐ Other professional degree, specify type \_\_\_\_\_

1. On the following pages is a list of activities that may be performed by those working in educational research, development, diffusion and/or evaluation. We understand that your current project work falls appropriately under one or more of those general descriptive headings. The more detailed list of activities or skills given below includes some items that fall under each of the general headings, but for the purposes of this question, it is only important that you respond to each individual item in terms of your present activity without regard to its possible placement under one of the more general area descriptions. Some of the activities in which you engage on your present job may not be included in the list. In order to avoid putting an excessive burden of time and effort on any respondent in completing the questionnaire, a longer, comprehensive list was divided into several parts. You need concern yourself only with the items on this list. Other respondents will respond to other items so as to obtain complete coverage.

Please respond to the activities in the following way:

First, read the activity description, then in Section A, indicate the degree to which you are now involved in it by placing a check mark in the appropriate column.

In Section B, indicate how you acquired the skills involved in the activity i.e., through formal training, or experience on the job, or through a combination of both. However, if you have not acquired the skills for the activity place a check mark in the first column of Section B and leave the remaining columns of Section B blank.

In Section C, show the extent to which you feel a need for further training in skills associated with the activity, regardless of how you answered it in the preceding Section B.

At the top of the table is an example of how a person might respond to the example item of "Developing measuring instruments." This individual indicated "moderate involvement" in the activity, felt that he had acquired the necessary skills mainly through "job experience" and finally, saw a "great need" for additional training in the associated skills.

## Section A

## Involvement in Activities

Little  
or No  
Involve-  
mentModerate  
Involve-  
mentHeavy  
Involve-  
mentHave Not  
Acquired  
Skills

## R-D-D-E ACTIVITIES

Example: Developing measuring instruments

X

1. Identifying and delineating significant researchable problems
2. Interpreting, evaluating, and synthesizing relevant literature
3. Formulating alternative generalizations from predicted research outcomes
4. Identifying classes of behavioral outcomes for measurement
5. Assessing the validity of outcome measures
6. Using aids in data analyses, such as computer processing
7. Interpreting and drawing appropriate conclusions and implications from data analyses
8. Drawing on research results in planning developmental activities
9. Specifying desired performance outcomes (objectives) of instruction
10. Determining appropriate sequences of topics in instruction
11. Describing a product to be developed
12. Designing and managing initial laboratory tests of developed techniques and materials
13. Specifying requirements for product dissemination vehicles to convey information to target groups

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## Section B

## Section C

[illegible]

## Section A

R-D-D-E ACTIVITIES

Involvement in Activities			Have Not Acquired Skills	How Mos Thr For Educ a Trai
Little or No Involve- ment	Moderate Involve- ment	Heavy Involve- ment		
14. Selecting the most effective dissemination vehicles to convey information to target groups	—	—	—	—
15. Implementing actual dissemination, including the direction of technical production personnel	—	—	—	—
16. Designing and implementing techniques for evaluating the effectiveness of a dissemination effort	—	—	—	—
17. Evaluating the effectiveness of a product demonstration	—	—	—	—
18. Identifying potential barriers to implementation after product adoption	—	—	—	—
19. Identifying values that are implicit in educational system goals	—	—	—	—
20. Comparing actual and intended educational system outcomes to identify discrepancies (needs) which exist in the system	—	—	—	—
21. Helping educational system personnel to apply criteria to lists of possible objectives in order to select those which are feasible within constraints of an operating context	—	—	—	—
22. Identifying and rating alternative strategies for attaining the selected educational system objectives	—	—	—	—
23. Identifying and rating available educational program resources (human, material, and financial) and/or potential sources of support	—	—	—	—
24. Predicting the potential barriers to success in a proposed course of educational program implementation action and judging the potential of the strategy for overcoming the estimated procedural barriers	—	—	—	—

## Section B

## Section C

[illegible]

Section A

R-D-D-E ACTIVITIES

25. Monitoring educational programs to detect deviations from design or specified procedures through techniques such as unobtrusive measures, systems analysis, and observational techniques
26. Applying appropriate designs to educational evaluation studies
27. Developing general criteria and designing data collection procedures for application in measuring the effectiveness and efficiency of existing innovative practices and products, i.e., minimum standards and outcomes which indicate successful utilization of practices and produces
28. Selecting (or developing) and using techniques of measurement to yield information relevant to standards to be used
29. Assessing the validity of outcome measures
30. Judging the strengths and weaknesses of the plans and procedures employed for meeting project objectives
31. Providing sufficient information to the decision-maker to enable him to decide whether to continue, modify, or terminate an activity or process evaluated

Involvement in Activities				
Little or No Involvement	Moderate Involvement	Heavy Involvement	Have Not Acquired Skills	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	



## Section B

## Section C

How Skills Were Acquired				Need for Additional Training in Associated Skills		
Have Not Acquired Skills	Mostly Through Formal Education and Training	Mostly Through Experience on the Job	About Equally Through a Combination of Both	Little or No Additional Need	Moderate Need	Great Need for Additional Training
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—

2. A number of educational areas are listed below. For each of the areas, please indicate the approximate amount of formal course work, graduate or undergraduate, you have completed by placing a checkmark in the appropriate column. If you have had no course work in the area, place the checkmark in the "none" column.

Educational Areas	Number of Courses			
	None (0)	Few (1 or 2)	Several (3 to 5)	Many (6 or more)
1. Statistics	—	—	—	—
2. Learning theory	—	—	—	—
3. Social Psychology	—	—	—	—
4. Audio-Visual Education	—	—	—	—
5. Marketing	—	—	—	—
6. Sociology	—	—	—	—
7. Research design	—	—	—	—
8. Testing and measurement	—	—	—	—
9. Systems theory	—	—	—	—
10. Advertising	—	—	—	—
11. Educational administration	—	—	—	—
12. Political science	—	—	—	—
13. Philosophy of science	—	—	—	—
14. Data processing	—	—	—	—
15. Theories of teaching	—	—	—	—
16. Curriculum development	—	—	—	—
17. Communication theory	—	—	—	—
18. Decision theory	—	—	—	—
19. Information theory	—	—	—	—
20. Journalism	—	—	—	—
21. Anthropology	—	—	—	—
22. Other (specify) _____	—	—	—	—

Circle the three areas from those listed that are most important for your current work, whether or not you have had course work in those areas

3. Since you have been employed in this field how much of the following kinds of training relevant to educational research, development, diffusion, or evaluation have you had? Indicate by placing a check mark in the appropriate column after each kind of training

Type of Training	Amount of Training			
	None	Very little	Moderate	Extensive
Special supervised on the job training or internship				
In-service courses				
Other (specify) _____				

4. Below is a list of types of employers.

In Section A, indicate the number of years you have been employed by each of the types of employers. If none, write "none" in the space.

In Section B, indicate the relevance of each type of previous employment to your present job by placing a checkmark in the appropriate column. If you have no previous experience put a check mark here \_\_\_\_\_, and go to the next item.

<u>Previous Employers</u>	<u>Section A</u>	<u>Section B</u> Relevance to present job		
	Number of years	Low	Moderate	High
College or university				
Educational R-D-D-E organizations				
Government				
Business and/or industry				
Other (specify _____)				

5. Indicate any skills you have in educational or R-D-D-E areas that you do not use in your present job. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6. To what extent are you satisfied with your present job? Place a checkmark below in the appropriate category.

Completely Satisfied	Satisfied	Undecided	Dissatisfied	Completely Dissatisfied
_____	_____	_____	_____	_____

7. To what extent are there advancement possibilities in your present job?  
Place a checkmark below the appropriate category.

Highly Probable	Probable	Unknown	Improbable	Highly Improbable
_____	_____	_____	_____	_____

8. Below is a list of types of training or training materials. Indicate the value you place upon each type either to meet current job requirements or advancement plans by placing a checkmark in the appropriate column after each type.

<u>Types of additional training</u>	<u>Little or no value</u>	<u>Some value</u>	<u>Great value</u>
A. Programmed instruction materials for your own use	_____	_____	_____
B. Three to five day institutes	_____	_____	_____
C. Longer institutes	_____	_____	_____
D. One or two week university short courses	_____	_____	_____
E. Correspondence courses	_____	_____	_____
F. Extension courses	_____	_____	_____
G. Other (specify)	_____	_____	_____

9. How important do you feel it is to receive college credit for any additional training you might obtain? Indicate by placing a checkmark below the appropriate category.

<u>Extremely Important</u>	<u>Important</u>	<u>Undecided</u>	<u>Unimportant</u>	<u>Completely Unimportant</u>
_____	_____	_____	_____	_____

If you checked "important" or "extremely important", please give your reasons

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PLEASE USE THE NEXT PAGE TO COMMENT ON THE QUESTIONNAIRE.

For each comment, please reference the page and item number so that we can make the appropriate changes (e.g., page\_\_\_\_, item\_\_\_\_, "could not understand the meaning of activity #\_\_\_\_"; or, page\_\_\_\_, item\_\_\_\_, "could not understand what I was supposed to do", and so on.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

SURVEY OF EDUCATION PERSONNEL IN RESEARCH,  
DEVELOPMENT, DIFFUSION AND EVALUATION ACTIVITIES

To the Respondent:

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Your cooperation is greatly appreciated.

Sincerely,

*Carl H. Rittenhouse*

Carl H. Rittenhouse  
Senior Research Psychologist

enclosures  
questionnaire  
return envelope

PLEASE FILL OUT THIS QUESTIONNAIRE AS SOON AS YOU RECEIVE IT AND RETURN IT TO US IMMEDIATELY UPON COMPLETION.

-1-

Questionnaire B

Project Code No.

Name (optional) \_\_\_\_\_

Please indicate the complete title of the project or activity on which you are currently working. \_\_\_\_\_

Write your job title or position \_\_\_\_\_

How long have you worked in present job?

Number of years \_\_\_\_\_ Number of months if less than one year \_\_\_\_\_

How many people do you supervise in this capacity? \_\_\_\_\_

Briefly describe what you do on this job. \_\_\_\_\_

Sex	Check the appropriate age category		Actual Annual Salary	
			Under \$3,000	\$18,000 - \$20,999
___ Male	___ Under 20	___ 45 - 49	___ \$ 3,000 - \$ 5,999	___ \$21,000 - \$23,999
___ Female	___ 25 - 29	___ 50 - 54	___ \$ 6,000 - \$ 8,999	___ \$24,000 - \$26,999
	___ 30 - 34	___ 55 - 59	___ \$ 9,000 - \$ 11,999	___ \$27,000 - \$29,999
	___ 35 - 39	___ 60 - 64	___ \$ 12,000 - \$ 14,999	___ \$30,000 or more
	___ 40 - 44	___ Over 64	___ \$ 15,000 - \$ 17,999	

If less than full time, indicate approximate fraction of full time that you work, e.g., 1/4, 1/2, \_\_\_\_\_

Check the highest level of formal education you have obtained.

- \_\_\_ High school with no college level course work
- \_\_\_ High school and some college courses, but do not have a degree or certificate yet. Number of years completed \_\_\_\_\_
- \_\_\_ Two years of college completed with a degree or certificate
- \_\_\_ Bachelors degree
- \_\_\_ Masters degree
- \_\_\_ Doctorate or Post-doctoral degree
- \_\_\_ Other professional degree, specify type \_\_\_\_\_

1. On the following pages is a list of activities that may be performed by those working in educational research, development, diffusion and/or evaluation. We understand that your current project work falls appropriately under one or more of those general descriptive headings. The more detailed list of activities or skills given below includes some items that fall under each of the general headings, but for the purposes of this question, it is only important that you respond to each individual item in terms of your present activity without regard to its possible placement under one of the more general area descriptions. Some of the activities in which you engage on your present job may not be included in the list. In order to avoid putting an excessive burden of time and effort on any respondent in completing the questionnaire, a longer, comprehensive list was divided into several parts. You need concern yourself only with the items on this list. Other respondents will respond to other items so as to obtain complete coverage.

Please respond to the activities in the following way:

First, read the activity description, then in Section A, indicate the degree to which you are now involved in it by placing a check mark in the appropriate column.

In Section B, indicate how you acquired the skills involved in the activity i.e., through formal training, or experience on the job, or through a combination of both. However, if you have not acquired the skills for the activity place a check mark in the first column of Section B and leave the remaining columns of Section B blank.

In Section C, show the extent to which you feel a need for further training in skills associated with the activity, regardless of how you answered it in the preceding Section B.

At the top of the table is an example of how a person might respond to the example item of "Developing measuring instruments." This individual indicated "moderate involvement" in the activity, felt that he had acquired the necessary skills mainly through "job experience" and finally, saw a "great need" for additional training in the associated skills.



## Section A

## R-D-D-E ACTIVITIES

Example: Developing measuring instruments

	Involvement in Activities			Have Not Acquired Skills	How Much Training
	Little or No Involvement	Moderate Involvement	Heavy Involvement		
		X			
1. Identifying and delineating significant researchable problems	_____	_____	_____	_____	_____
2. Formulating hypotheses or empirical questions to be answered by a study	_____	_____	_____	_____	_____
3. Identifying appropriate research methods	_____	_____	_____	_____	_____
4. Choosing specific research variables and treatments (where appropriate) to be used	_____	_____	_____	_____	_____
5. Using a variety of data-gathering methods (tests, interviews, analysis of documents, etc.)	_____	_____	_____	_____	_____
6. Interpreting and drawing appropriate conclusions and implications from data analyses	_____	_____	_____	_____	_____
7. Formulating statements of a theory that offers an explanation (cause-effect relationship) of the behavior under study	_____	_____	_____	_____	_____
8. Conceptualizing educational systems, their elements, and interrelations among these elements	_____	_____	_____	_____	_____
9. Specifying desired performance outcomes (objectives) of instruction	_____	_____	_____	_____	_____
10. Describing a product to be developed	_____	_____	_____	_____	_____
11. Composing effective oral and written forms of instructional communications	_____	_____	_____	_____	_____
12. Designing and managing field try-outs and tests	_____	_____	_____	_____	_____

## Section B

## Section C

[illegible]

## Section A

## R-D-D-E ACTIVITIES

13. Defining and analyzing characteristics of target group(s) for product dissemination
14. Selecting the most effective dissemination vehicles to convey information to target groups
15. Implementing actual dissemination, including the direction of technical production personnel
16. Specifying nature of a product demonstration
17. Identifying features of an adopting organization or system which differ from those in which a product was developed and tested
18. Devising and conducting long-range evaluation of an installed product package
19. Identifying the nature of the standards or norms that decision-makers will apply in interpreting the relevant educational data that may be provided
20. Explicating the problems that create discrepancies between actual and intended system outcomes and diagnosing the causes of these problems
21. Helping educational system personnel to establish priorities for selected system objectives
22. Identifying and rating alternative strategies for attaining the selected educational system objectives

[illegible]

## Section B

## Section C

[illegible]

## Section A

## R-D-D-E ACTIVITIES

23. Identifying and rating available educational program resources (human, material, and financial) and/or potential sources of support
24. Identifying alternative tactics to implement selected strategies and choose those that seem most likely to succeed
25. Anticipating predicted barriers to programs and remaining alert to unanticipated problems that threaten their success
26. Developing general criteria and designing data collection procedures for application in measuring the effectiveness and efficiency of existing innovative practices and products, i.e., minimum standards and outcomes which indicate successful utilization of practices and products
27. If necessary, translating program objectives into behavioral terms
28. Selecting (or developing) and using techniques of measurement to yield information relevant to standards to be used
29. Collecting and organizing data preparatory to analysis
30. Deciding how to explain an outcome as a function of plans, procedures, and resources
31. Specifying changes that need to be made in the context evaluation system due to decisions about program continuation

[illegible]

## Section B

## Section C

[illegible]

2. A number of educational areas are listed below. For each of the areas, please indicate the approximate amount of formal course work, graduate or undergraduate, you have completed by placing a checkmark in the appropriate column. If you have had no course work in the area, place the checkmark in the "none" column.

Educational Areas	Number of Courses			
	None (0)	Few (1 or 2)	Several (3 to 5)	Many (6 or more)
1. Statistics	—	—	—	—
2. Learning theory	—	—	—	—
3. Social Psychology	—	—	—	—
4. Audio-Visual Education	—	—	—	—
5. Marketing	—	—	—	—
6. Sociology	—	—	—	—
7. Research design	—	—	—	—
8. Testing and measurement	—	—	—	—
9. Systems theory	—	—	—	—
10. Advertising	—	—	—	—
11. Educational administration	—	—	—	—
12. Political science	—	—	—	—
13. Philosophy of science	—	—	—	—
14. Data processing	—	—	—	—
15. Theories of teaching	—	—	—	—
16. Curriculum development	—	—	—	—
17. Communication theory	—	—	—	—
18. Decision theory	—	—	—	—
19. Information theory	—	—	—	—
20. Journalism	—	—	—	—
21. Anthropology	—	—	—	—
22. Other (specify)	—	—	—	—

Circle the three areas from those listed that are most important for your current work, whether or not you have had course work in those areas

3. Since you have been employed in this field how much of the following kinds of training relevant to educational research, development, diffusion, or evaluation have you had? Indicate by placing a check mark in the appropriate column after each kind of training

Type of Training	Amount of Training			
	None	Very little	Moderate	Extensive
Special supervised on the job training or internship				
In-service courses				
Other (specify)				

4. Below is a list of types of employers.

In Section A, indicate the number of years you have been employed by each of the types of employers. If none, write "none" in the space.

In Section B, indicate the relevance of each type of previous employment to your present job by placing a checkmark in the appropriate column. If you have no previous experience put a check mark here \_\_\_\_\_, and go to the next item.

Previous Employers	Section A	Section B Relevance to present job		
	Number of years	Low	Moderate	High
College or university				
Educational R-D-D-E organizations				
Government				
Business and/or industry				
Other (specify _____)				

5. Indicate any skills you have in educational or R-D-D-E areas that you do not use in your present job. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6. To what extent are you satisfied with your present job? Place a checkmark below in the appropriate category.

Completely Satisfied	Satisfied	Undecided	Dissatisfied	Completely Dissatisfied
_____	_____	_____	_____	_____



7. To what extent are there advancement possibilities in your present job?

Place a checkmark below the appropriate category.

Highly Probable	Probable	Unknown	Improbable	Highly Improbable
_____	_____	_____	_____	_____

8. Below is a list of types of training or training materials. Indicate the value you place upon each type either to meet current job requirements or advancement plans by placing a checkmark in the appropriate column after each type.

<u>Types of additional training</u>	<u>Little or no value</u>	<u>Some value</u>	<u>Great value</u>
A. Programmed instruction materials for your own use	_____	_____	_____
B. Three to five day institutes	_____	_____	_____
C. Longer institutes	_____	_____	_____
D. One or two week university short courses	_____	_____	_____
E. Correspondence courses	_____	_____	_____
F. Extension courses	_____	_____	_____
G. Other (specify)	_____	_____	_____

9. How important do you feel it is to receive college credit for any additional training you might obtain? Indicate by placing a checkmark below the appropriate category.

<u>Extremely Important</u>	<u>Important</u>	<u>Undecided</u>	<u>Unimportant</u>	<u>Completely Unimportant</u>
_____	_____	_____	_____	_____

If you checked "important" or "extremely important", please give your reasons

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PLEASE USE THE NEXT PAGE TO COMMENT ON THE QUESTIONNAIRE.

For each comment, please reference the page and item number so that we can make the appropriate changes (e.g., page\_\_\_\_, item\_\_\_\_, "could not understand the meaning of activity #\_\_\_\_"; or, page\_\_\_\_, item\_\_\_\_, "could not understand what I was supposed to do", and so on.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or printed text on the paper.

Appendix C  
REVISED EMPLOYER AND EMPLOYEE QUESTIONNAIRES

(Cover Letter from BESE or NCES for LEA Unit Directors)

To The Unit Director:

The study of which the enclosed questionnaire is a part is sponsored by the Research Training Branch of the National Center for Educational Research and Development. We urgently require data collected nationally and on a valid statistical basis in order to plan programs to meet the demand for trained personnel in Educational Research, Development, Diffusion and Evaluation. We ask, therefore, that you cooperate in filling out and returning the brief questionnaire promptly.

In addition to the information obtained through the use of the enclosed questionnaire sent to project and unit directors and leaders, it is necessary to determine the perceptions of other project and unit personnel on related questions. For that purpose, a second brief questionnaire has been prepared. In order to select a sample of individuals to whom the second questionnaire will be sent we ask that you provide the survey contractor with a list of some of your unit personnel chosen as indicated on the cover page of the questionnaire.

The study findings should be of substantial benefit to everyone concerned with Educational Research, Development, Diffusion and Evaluation in helping to insure an adequate supply of trained personnel.

Your assistance is essential in providing valid and reliable information. It is very much appreciated.

(Employer Questionnaire Cover Letter for LEA Unit Directors)

SURVEY OF PERSONNEL IN EDUCATIONAL RESEARCH  
DEVELOPMENT, DIFFUSION, EVALUATION AND PLANNING ACTIVITIES

To the Unit Director:

The following questionnaire is concerned with employment demand and training needs for personnel in Educational Research, Development, Diffusion, Evaluation (R-D-D-E) and for those in Educational Planning. These activities are described on the following page. It is part of a study designed to assist in planning for the development and support of federally sponsored programs to respond to requirements for trained personnel (and training capabilities) in educational R-D-D-E. Because relevant, accessible training programs and training materials are important to both employers and employees in these fields, we earnestly request your cooperation in filling out the questionnaire.

The survey is sponsored by the Research Training Branch of The National Center for Educational Research and Development and is the first survey of educational R-D-D-E personnel activities and training that has been conducted on the basis of a rigorous sampling design so that reasonable estimates of personnel in the various sectors of educational R-D-D-E can be made.

Please respond in your capacity as director of your school district's R-D-D-E unit.

In addition to filling out the questionnaire, we ask that you provide us with a listing of the names of project personnel who serve in professional or paraprofessional capacities, as those categories are defined in Item 2 of the questionnaire, and on the enclosed sheet provided for the listing. The lists will form a basis for designing a sample of individuals to whom an additional questionnaire concerned with work activities and training will be sent.

We realize the sensitivity of some of the information requested, and assure you that all data will be treated completely confidentially and the material will be analyzed and reported only by aggregates, e.g., size of funding, type of R-D-D-E work, etc. The final page of the questionnaire contains a brief explanation of the reasons for asking the various questions and the use that will be made of the answers. In addition, we are enclosing a prepaid post card. If you would like to receive a brief summary of the report resulting from the survey, check the appropriate box on the card and return it to us.

Please return the questionnaire and the employee listing in the enclosed stamped, self-addressed envelope.

Your prompt attention and cooperation will be very much appreciated.

### Educational R-D-D-E Activities

Educational Research includes activities which produce reliable knowledge about new facts, principles or theories. It employs the procedures of problem stating or hypothesis formulation, design, measurement and analysis, in order to permit the generalization of findings and replication, also, for purposes of verification. Educational research may be directed to highly diverse areas of investigation, such as the effects of teacher behavior upon student performance, stages of growth and development and their impact upon the learning process, racial-ethnic correlates of intelligence and achievement, and the effects of individualized versus traditional instruction.

Educational Development includes activities which create new educational methods, systems, materials or devices which have practical utility. It includes the design of new products, and field testing to determine their feasibility and the need for further modifications. Development also generates new products such as curriculum materials, teaching techniques, instructional media, ways of assigning pupils to school and architectural designs.

Educational Diffusion involves procedures which create the necessary conditions for the adoption and utilization of new educational products or techniques. It includes activities such as the conduct of demonstrations, installation of new products on a trial basis, making adaptations to local school situations and making widespread dissemination of information about new educational products and their proven effectiveness.

Educational Evaluation includes activities that are necessary for determining the effectiveness of educational programs, products or procedures. It may be done rigorously through deriving objective measures of effectiveness under carefully defined conditions and by comparing results against standards; or, evaluation may be conducted through more informal methods such as ratings. Many measures are used in evaluation that include student gains, teacher ratings, standardized aptitude scores, costs of educational programs and measures of time-to-completion of educational functions being studied.

Educational Planning and Analysis includes activities directed toward the establishment of goals and objectives within operating constraints, and the development of strategies for attaining objectives after they have been ordered for priority. Outcomes may be evaluated by rigorous techniques such as economic, systems or psychometric analyses; however, informal observation techniques may be used also. Adjustment is made in objectives by educational planners through a process of feedback. Educational planning involves projects that are highly varied such as assessing educational needs, reorganization of curriculum for individualization, introduction of modular scheduling, goal-setting of achievement levels for disadvantaged students, and the utilization of para-professionals and teacher aides.

QUESTIONNAIRE A (School District)

Training and Personnel Requirements

R-D-D-E (Supervisor Questionnaire)

Name of School District \_\_\_\_\_

Name of Respondent \_\_\_\_\_

Name of Unit Supervised by Respondent \_\_\_\_\_

Position Title of Respondent \_\_\_\_\_

Address \_\_\_\_\_

Telephone \_\_\_\_\_

Please describe briefly the kinds of projects in which your unit typically engaged and the major functions your unit performs in the school district.

Description of projects: \_\_\_\_\_

Major functions: \_\_\_\_\_

Please enter the level of funding of the unit in which Research, Development, Diffusion and Evaluation work is done in the appropriate spaces. If data are not available, make the best estimate you can.

Approximate level of unit funding from all sources for current  
fiscal year \$ \_\_\_\_\_

Approximate level of unit funding from all sources for next fiscal year  
\$ \_\_\_\_\_

Approximate percent of current fiscal year unit funds from:

- \_\_\_\_ % Local School District
- \_\_\_\_ % County Office of Education
- \_\_\_\_ % State Office of Education (Specify) \_\_\_\_\_
- \_\_\_\_ % U. S. Office of Education
- \_\_\_\_ % Office of Economic Opportunity
- \_\_\_\_ % Private Foundations
- \_\_\_\_ % Other (Specify) \_\_\_\_\_

PLEASE ASSURE THAT ABOVE PERCENTAGES ADD TO 100%



1. In order to help us classify your project or unit work, which may involve several educational Research, Development, Diffusion, Evaluation, or related planning and management tasks, please indicate the degree to which each of the following activities is part of the work effort on your project or in your unit.

Indicate the degree of project involvement in each activity by placing one of the following letters in the space provided before each item:

Place an "L" in the space if a large part of the effort is devoted to the activity.

Place an "M" in the space if a moderate part of the effort is devoted to the activity.

Place an "S" in the space if a small part of the effort is devoted to the activity.

Place an "N" in the space if no part of the effort is devoted to the activity.

Level of Effort

- |     |       |   |
|-----|-------|---|
| 1.  | _____ | Conducting basic scientific inquiry related to educational problems.          |
| 2.  | _____ | Conducting applied research studies directly related to educational problems. |
| 3.  | _____ | Investigating and assessing educational needs and requirements.               |
| 4.  | _____ | Gathering and providing information for program planning and design.          |
| 5.  | _____ | Developing new products or solutions for educational programs.                |
| 6.  | _____ | Testing and evaluating innovative solutions and programs.                     |
| 7.  | _____ | Creating widespread awareness of tested solutions and programs.               |
| 8.  | _____ | Demonstrating effectiveness of solutions and programs to target audiences.    |
| 9.  | _____ | Training target audiences in the use of solutions and programs.               |
| 10. | _____ | Financial planning, and accounting for resources and expenditures.            |
| 11. | _____ | Preparing reports, documentation, etc.  |
| 12. | _____ | Training project/agency personnel to perform any R-D-D-E activity.            |
| 13. | _____ | Other (specify) _____   |

2. Below is a list of definitions of personnel categories for individuals involved in R-D-D-E.

- Professional

Substantial responsibility for carrying out project or unit tasks independently

- Paraprofessional

Responsibility for carrying out project or unit tasks under moderate to heavy supervision, with little independence of action

- Technical

Trained for and carries out specific project activities such as computer programming, audio-visual aid preparation, or art work

- Clerical

Routine typing, filing, numerical and other clerical tasks

The categories are given in the table below. Please indicate in the spaces provided for each category, the number of full-time individuals you employ on the project or in the unit, the number of part-time individuals and the number of full-time equivalents.

<u>Personnel Category</u>	<u>Full Time</u>	<u>Part Time</u>	<u>Full-time Equivalents</u>
Professional	_____	_____	_____
Paraprofessional	_____	_____	_____
Technical	_____	_____	_____
Clerical	_____	_____	_____

3. Please list the names of project or unit personnel in professional and paraprofessional categories on this sheet. Use personnel category definitions in the previous item.

The attached list of personnel has been supplied by the U. S. Office of Education. Please include these names on the list below if they are still working on the project, and add any new personnel not on the Office of Education list.

After each name, indicate whether the individual works full time on the project or part time. If full time, place an "F" in the space. If part time, indicate the fraction that is worked, i.e.,  $\frac{1}{2}$ ,  $\frac{1}{4}$ , etc. in the space.

<u>Professional</u>	
<u>Name</u>	<u>Fraction Of Time Worked</u>

<u>Paraprofessional</u>	
<u>Name</u>	<u>Fraction Of Time Worked</u>

4. Indicate for each personnel category the number of currently unfilled positions, the number of losses in the last year and the number of personnel added in the last year. (If none, write "none" opposite the appropriate category.) Refer to category definitions in Question 2.

<u>Personnel Categories</u>	<u>Number of currently unfilled positions</u>	<u>Number of losses in last year</u>	<u>Number of additions in last year</u>
Professional	_____	_____	_____
Paraprofessional	_____	_____	_____
Technical	_____	_____	_____
Clerical	_____	_____	_____

Indicate major reasons for current vacancies, if any. \_\_\_\_\_

Indicate major reasons for losses, if any. \_\_\_\_\_

Indicate major reasons for additions, if any. \_\_\_\_\_

5. How many employees do you anticipate hiring in the next two years for each of the following levels? (If none, write "none" opposite the appropriate category.) Refer to category definitions given in Question 2.

<u>Personnel Categories</u>	<u>Number to be Hired</u>
Professional	_____
Paraprofessional	_____
Technical	_____
Clerical	_____

6. If your funding were to be increased by a quarter (25% more than current funding) in the next year:
- A. How many people would you need in addition to present staff and at what levels? (e.g., "3 professionals"). Use the personnel categories given in Question 2. \_\_\_\_\_
- \_\_\_\_\_
- B. What kinds of skills would they represent (e.g., proposal writing, statistical analysis) \_\_\_\_\_
- \_\_\_\_\_
7. Listed below are several kinds of in-house employee training. Check those you have used during the past year.

<u>In-House Employee Training</u>	<u>Used During Past Year</u>
A. Special supervised OJT or internship	_____
B. One to two-week short courses	_____
C. One to five-day seminars or institutes	_____
D. Longer courses	_____
E. Other (specify) _____	_____
_____	

8. How much value do you place on the following training approaches for current employees?

Place a check mark in the appropriate "value" column

Training Approaches	Value of Approach		
	Little or no value	Moderate value	Great value
A. Three to five-day institutes or seminars	_____	_____	_____
B. Longer institutes	_____	_____	_____
C. One to two-week short courses	_____	_____	_____
D. Longer courses	_____	_____	_____
E. Internships in other agencies	_____	_____	_____
F. Correspondence courses	_____	_____	_____
G. Extension or other course arrangements with colleges or universities on a <u>released time</u> basis	_____	_____	_____
H. Extension or other course arrangements with colleges or universities on an <u>employee's own time</u>	_____	_____	_____
I. Other (specify)	_____	_____	_____

9. Have you done any recruiting in the last year? Yes \_\_\_\_\_ No \_\_\_\_\_

If you answered "yes", please respond to Question 10 through Question 14.

If you answered "no", turn to page \_\_\_\_\_ and answer Question 14.

- (To be answered only if you said "yes" to Question 9)  
10. Are there any skills or sensitivities that have been particularly difficult to find in recruiting staff for your project or unit? Yes \_\_\_\_\_ No \_\_\_\_\_

If you answered "yes", please describe.

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(To be answered only if you said "yes" to Question 9)

11. Have you had difficulty in recruiting personnel with qualifications in specific content areas such as early childhood education, minority education, remedial reading, vocational education or others?

Yes \_\_\_\_\_

No \_\_\_\_\_

If you answered "yes", please specify areas.

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(To be answered only if you said "yes" to Question 9)

12. Listed below are a number of recruiting procedures. First, place a checkmark in the left hand column by those you have used. Next, for each one that is checked, indicate how effective it has been in finding people with appropriate skills by placing a checkmark in the appropriate column.

Recruiting Procedures	Have Used	Effectiveness of Recruiting Procedures		
		Minimally Effective	Moderately Effective	Very Effective
A. Journal or newspaper advertising	_____	_____	_____	_____
B. Professional meeting employment services	_____	_____	_____	_____
C. Referral by other employees	_____	_____	_____	_____
D. Colleges and university employment services	_____	_____	_____	_____
E. Informal survey of professional colleagues	_____	_____	_____	_____
F. Review of unsolicited applications	_____	_____	_____	_____
G. Recruitment from within	_____	_____	_____	_____
H. Other(specify) _____	_____	_____	_____	_____
_____	_____	_____	_____	_____

(To be answered only if you said "yes" to Question 9)

13. Listed below are a number of selection techniques. First, place a checkmark in the left hand column by each technique you have used. Next, for each one that is checked, indicate how effective it has been for you in identifying personnel with needed skills by placing a checkmark in the appropriate column.

Selection Techniques	Have Used	Effectiveness of Selection Techniques		
		Minimally Effective	Moderately Effective	Very Effective
A. Interviews	_____	_____	_____	_____
B. Tests	_____	_____	_____	_____
C. Application blanks	_____	_____	_____	_____
D. References	_____	_____	_____	_____
E. Work samples	_____	_____	_____	_____
F. Other (specify)	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Please comment on any special problems in using the selection techniques.

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14. Please comment on any aspects of educational R-D-D-E employment or training that are of interest or concern to you.

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## Rationale for Questionnaire A Items

Identifying information will be used for preparing tabular presentations and for making comparisons of personnel needs and training in various kinds of R-D-D-E activities.

Responses to Question 1 will provide the basis for classifying projects or units as to their major focus as Research, Development, Diffusion, Evaluation or Planning activities.

Responses to Questions 2 through 6 will provide the basis for analysis of current R-D-D-E personnel structures by category and for analysis of current and projected needs.

Responses to Questions 7 and 8 will indicate kinds of training currently in use and estimates of the worth of various kinds of training in helping educational R-D-D-E employees to upgrade their skills.

Responses to Questions 9 through 13 will provide information on skills and knowledge that are in short supply currently, as indicated by recruiting difficulties, and therefore on areas in which training emphasis might be placed. Effective recruiting procedures and recruiting techniques will also be identified.

(Cover Letter from NCERD or NCES for Project Directors)

To The Project Director:

The study of which the enclosed questionnaire is a part is sponsored by the Research Training Branch of the National Center for Educational Research and Development. We urgently require data collected nationally and on a valid statistical basis in order to plan programs to meet the demand for trained personnel in Educational Research, Development, Diffusion and Evaluation. We ask, therefore, that you cooperate in filling out and returning the brief questionnaire promptly.

In addition to the information obtained through the use of the enclosed questionnaire sent to project and unit directors and leaders, it is necessary to determine the perceptions of other project and unit personnel on related questions. For that purpose, a second brief questionnaire has been prepared. In order to select a sample of individuals to whom the second questionnaire will be sent we ask that you provide the survey contractor with a list of some of your project personnel chosen as indicated on the cover page of the questionnaire.

The study findings should be of substantial benefit to everyone concerned with Educational Research, Development, Diffusion and Evaluation in helping to insure an adequate supply of trained personnel.

Your assistance is essential in providing valid and reliable information. It is very much appreciated.

(Employer Questionnaire Cover Letter for Project Directors)

SURVEY OF PERSONNEL IN EDUCATIONAL RESEARCH,  
DEVELOPMENT, DIFFUSION, EVALUATION AND PLANNING ACTIVITIES

To The Project Director:

The following questionnaire is concerned with employment demand and training needs for personnel in Educational Research, Development, Diffusion, Evaluation (R-D-D-E), and for those in Educational Planning. These activities are described on the following page. It is part of a study designed to assist in planning for the development and support of federally sponsored programs to respond to requirements for trained personnel (and training capabilities) in educational R-D-D-E. Because relevant, accessible training programs and training materials are important to both employers and employees in these fields, we earnestly request your cooperation in filling out the questionnaire.

The survey is sponsored by the Research Training Branch of The National Center for Educational Research and Development and is the first survey of educational R-D-D-E personnel activities and training that has been conducted on the basis of a rigorous sampling design so that reasonable estimates of personnel in the various sectors of educational R-D-D-E can be made.

Please respond in your capacity as director or leader of a federally funded R-D-D-E project. Your responses to the items should have reference to the major such project on which you serve in a leadership capacity.

In addition to filling out the questionnaire, we ask that you provide us with a listing of the names of project personnel who serve in professional or paraprofessional capacities, as those categories are defined in Item 2 of the questionnaire, and on the enclosed sheet provided for the listing. The lists will form a basis for designing a sample of individuals to whom an additional questionnaire concerned with work activities and training will be sent.

We realize the sensitivity of some of the information requested and assure you that all data will be treated completely confidentially and the material will be analyzed and reported only by aggregates, e.g., size of funding type of R-D-D-E work, etc. The final page of the questionnaire contains a brief explanation of the reasons for asking the various questions and the use that will be made of the answers. In addition, we are enclosed a pre-paid post card. If you would like to receive a brief summary of the report resulting from the survey, check the appropriate box on the card and return it to us.

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### Educational R-D-D-E Activities

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QUESTIONNAIRE A (Project)  
Training and Personnel Requirements  
R-D-D-E (Project Director Questionnaire)

Project Title \_\_\_\_\_

Project Director \_\_\_\_\_

Position Title \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_

Telephone \_\_\_\_\_

Agency Receiving Contract or Grant \_\_\_\_\_

Agency Director and Title \_\_\_\_\_  
\_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_

Telephone \_\_\_\_\_

Sponsoring/Funding Agency \_\_\_\_\_

Agency Department \_\_\_\_\_

Project Officer \_\_\_\_\_

Primary Project Objective \_\_\_\_\_  
\_\_\_\_\_

Starting Date of Project \_\_\_\_\_

Ending Date of Project \_\_\_\_\_

Place a checkmark beside the type of organization in which the project resides:

- |  |   |
|--|---|
| <input type="checkbox"/> Educational R&D Center  | <input type="checkbox"/> Public School or School District |
| <input type="checkbox"/> Educational Laboratory  | <input type="checkbox"/> State Department of Education    |
| <input type="checkbox"/> College, School of Education,<br>Department or other<br>university office | <input type="checkbox"/> Professional Association         |
| <input type="checkbox"/> Private nonprofit organization  | <input type="checkbox"/> Agency of Federal Government     |
| <input type="checkbox"/> Industry or commercial<br>organization                                    | Specify department _____                                  |
| <input type="checkbox"/> Other (specify) _____   | _____   |

Approximate level of project funding from all sources for current fiscal year

\$ \_\_\_\_\_

Approximate level of project funding from all sources for last fiscal year

\$ \_\_\_\_\_

Anticipated level of project funding from all sources next fiscal year

\$ \_\_\_\_\_

Approximate percent of current fiscal year project funds from:

- ☐ % U.S. Office of Education
- ☐ % Office of Economic Opportunity
- ☐ % National Science Foundation
- ☐ % Other federal agencies (specify) \_\_\_\_\_
- ☐ % State (specify) \_\_\_\_\_
- ☐ % Private Foundations
- ☐ % Local School District
- ☐ % Industry
- ☐ % Other (specify) \_\_\_\_\_

1. In order to help us classify your project or unit work, which may involve several educational Research, Development, Diffusion, Evaluation, or related planning and management tasks, please indicate the degree to which each of the following activities is part of the work effort on your project or in your unit.

Indicate the degree of project involvement in each activity by placing one of the following letters in the space provided before each item:

Place an "L" in the space if a large part of the effort is devoted to the activity.

Place an "M" in the space if a moderate part of the effort is devoted to the activity.

Place an "S" in the space if a small part of the effort is devoted to the activity.

Place an "N" in the space if no part of the effort is devoted to the activity.

Level of Effort

1. \_\_\_\_\_ Conducting basic scientific inquiry related to educational problems.
2. \_\_\_\_\_ Conducting applied research studies directly related to educational problems.
3. \_\_\_\_\_ Investigating and assessing educational needs and requirements.
4. \_\_\_\_\_ Gathering and providing information for program planning and design.
5. \_\_\_\_\_ Developing new products or solutions for educational programs.
6. \_\_\_\_\_ Testing and evaluating innovative solutions and programs.
7. \_\_\_\_\_ Creating widespread awareness of tested solutions and programs.
8. \_\_\_\_\_ Demonstrating effectiveness of solutions and programs to target audiences.
9. \_\_\_\_\_ Training target audiences in the use of solutions and programs.
10. \_\_\_\_\_ Financial planning, and accounting for resources and expenditures.
11. \_\_\_\_\_ Preparing reports, documentation, etc.
12. \_\_\_\_\_ Training project/agency personnel to perform any R-D-D-E activity.
13. \_\_\_\_\_ Other (specify) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Below is a list of definitions of personnel categories for individuals involved in R-D-D-E.

- Professional

Substantial responsibility for carrying out project or unit tasks independently

- Paraprofessional

Responsibility for carrying out project or unit tasks under moderate to heavy supervision, with little independence of action

- Technical

Trained for and carries out specific project activities such as computer programming, audio-visual aid preparation, or art work

- Clerical

Routine typing, filing, numerical and other clerical tasks

The categories are given in the table below. Please indicate in the spaces provided for each category, the number of full-time individuals you employ on the project or in the unit, the number of part-time individuals and the number of full-time equivalents.

<u>Personnel Category</u>	<u>Full Time</u>	<u>Part Time</u>	<u>Full-time Equivalents</u>
Professional	_____	_____	_____
Paraprofessional	_____	_____	_____
Technical	_____	_____	_____
Clerical	_____	_____	_____



3. Please list the names of project or unit personnel in professional and paraprofessional categories on this sheet. Use personnel category definitions in the previous item.

The attached list of personnel has been supplied by the U. S. Office of Education. Please include these names on the list below if they are still working on the project, and add any new personnel not on the Office of Education list.

After each name, indicate whether the individual works full time on the project or part itme. If full time, place an "F" in the space. If part time, indicate the fraction that is worked, i.e.,  $\frac{1}{2}$ ,  $\frac{1}{4}$ , etc. in the space.

<u>Professional</u>	
<u>Name</u>	<u>Fraction Of Time Worked</u>

<u>Paraprofessional</u>	
<u>Name</u>	<u>Fraction Of Time Worked</u>

4. Indicate for each personnel category the number of currently unfilled positions, the number of losses in the last year and the number of personnel added in the last year. (If none, write "none" opposite the appropriate category.) Refer to category definitions in Question 2.

<u>Personnel Categories</u>	<u>Number of currently unfilled positions</u>	<u>Number of losses in last year</u>	<u>Number of additions in last year</u>
Professional	_____	_____	_____
Paraprofessional	_____	_____	_____
Technical	_____	_____	_____
Clerical	_____	_____	_____

Indicate major reasons for current vacancies, if any. \_\_\_\_\_

Indicate major reasons for losses, if any. \_\_\_\_\_

Indicate major reasons for additions, if any. \_\_\_\_\_

5. How many employees do you anticipate hiring in the next two years for each of the following levels? (If none, write "none" opposite the appropriate category.) Refer to category definitions given in Question 2.

<u>Personnel Categories</u>	<u>Number to be Hired</u>
Professional	_____
Paraprofessional	_____
Technical	_____
Clerical	_____

6. If your funding were to be increased by a quarter (25% more than current funding) in the next year:

A. How many people would you need in addition to present staff and at what levels? (e.g., "3 professionals"). Use the personnel categories given in Question 2. \_\_\_\_\_

B. What kinds of skills would they represent (e.g., proposal writing, statistical analysis) \_\_\_\_\_

7. Listed below are several kinds of in-house employee training. Check those you have used during the past year.

<u>In-House Employee Training</u>	<u>Used During Past Year</u>
A. Special supervised OJT or internship	_____
B. One to two-week short courses	_____
C. One to five-day seminars or institutes	_____
D. Longer courses	_____
E. Other (specify) _____	_____

8. How much value do you place on the following training approaches for current employees?

Place a check mark in the appropriate "value" column

Training Approaches	Value of Approach		
	Little or no value	Moderate value	Great value
A. Three to five-day institutes or seminars	_____	_____	_____
B. Longer institutes	_____	_____	_____
C. One to two-week short courses	_____	_____	_____
D. Longer courses	_____	_____	_____
E. Internships in other agencies	_____	_____	_____
F. Correspondence courses	_____	_____	_____
G. Extension or other course arrangements with colleges or universities on a <u>released time</u> basis	_____	_____	_____
H. Extension or other course arrangements with colleges or universities on an <u>employee's own time</u>	_____	_____	_____
I. Other (specify)	_____	_____	_____

9. Have you done any recruiting in the last year? Yes \_\_\_\_\_ No \_\_\_\_\_

If you answered "yes", please respond to Question 10 through Question 14.

If you answered "no", turn to page \_\_\_\_\_ and answer Question 14.

(To be answered only if you said "yes" to Question 9)

10. Are there any skills or sensitivities that have been particularly difficult to find in recruiting staff for your project or unit? Yes \_\_\_\_\_ No \_\_\_\_\_

If you answered "yes", please describe.

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(To be answered only if you said "yes" to Question 9)

11. Have you had difficulty in recruiting personnel with qualifications in specific content areas such as early childhood education, minority education, remedial reading, vocational education or others?

Yes \_\_\_\_\_

No \_\_\_\_\_

If you answered "yes", please specify areas.

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(To be answered only if you said "yes" to Question 9)

12. Listed below are a number of recruiting procedures. First, place a checkmark in the left hand column by those you have used. Next, for each one that is checked, indicate how effective it has been in finding people with appropriate skills by placing a checkmark in the appropriate column.

Recruiting Procedures	Have Used	Effectiveness of Recruiting Procedures		
		Minimally Effective	Moderately Effective	Very Effective
A. Journal or newspaper advertising	_____	_____	_____	_____
B. Professional meeting employment services	_____	_____	_____	_____
C. Referral by other employees	_____	_____	_____	_____
D. Colleges and university employment services	_____	_____	_____	_____
E. Informal survey of professional colleagues	_____	_____	_____	_____
F. Review of unsolicited applications	_____	_____	_____	_____
G. Recruitment from within	_____	_____	_____	_____
H. Other(specify)_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

(To be answered only if you said "yes" to Question 9)

13. Listed below are a number of selection techniques. First, place a checkmark in the left hand column by each technique you have used. Next, for each one that is checked, indicate how effective it has been for you in identifying personnel with needed skills by placing a checkmark in the appropriate column.

Selection Techniques	Have Used	Effectiveness of Selection Techniques		
		Minimally Effective	Moderately Effective	Very Effective
A. Interviews	_____	_____	_____	_____
B. Tests	_____	_____	_____	_____
C. Application blanks	_____	_____	_____	_____
D. References	_____	_____	_____	_____
E. Work samples	_____	_____	_____	_____
F. Other (specify)	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Please comment on any special problems in using the selection techniques.

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14. Please comment on any aspects of educational R-D-D-E employment or training that are of interest or concern to you.

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## Rationale for Questionnaire A Items

Identifying information will be used for preparing tabular presentations and for making comparisons of personnel needs and training in various kinds of R-D-D-E activities.

Responses to Question 1 will provide the basis for classifying projects or units as to their major focus as Research, Development, Diffusion, Evaluation or Planning activities.

Responses to Questions 2 through 6 will provide the basis for analysis of current R-D-D-E personnel structures by category and for analysis of current and projected needs.

Responses to Questions 7 and 8 will indicate kinds of training currently in use and estimates of the worth of various kinds of training in helping educational R-D-D-E employees to upgrade their skills.

Responses to Questions 9 through 13 will provide information on skills and knowledge that are in short supply currently, as indicated by recruiting difficulties, and therefore on areas in which training emphasis might be placed. Effective recruiting procedures and recruiting techniques will also be identified.

(Employee Questionnaire Cover Letter)

To The Respondent:

The attached questionnaire relates to one part of a survey of employment demand and training for personnel in Educational Research, Development, Diffusion and Evaluation (R-D-D-E). You have been identified by your supervisor as one who is engaged in one or more of these activities. We ask your cooperation in filling out the questionnaire.

You may have filled out questionnaires that appear to be similar in the past, but this is the first survey of educational R-D-D-E that has been conducted on the basis of a rigorous sampling design so that reasonable estimates of personnel in the various sectors of educational R-D-D-E can be made.

We realize the sensitivity of some of the information requested and assure you that all responses are completely confidential and will be seen only by study personnel. Material will be analyzed only by aggregates, and there will be no reporting of individual responses. Certain questions are being asked in order to compare equality of employment, salary levels, age groupings, etc. with those in other occupations. The final page of the questionnaire contains a brief explanation of the reasons for asking the various questions and the use that will be made of the answers.

When you have completed the questionnaire, please return it directly to us in the attached, stamped, self-addressed envelope.

Your prompt attention and cooperation will be greatly appreciated.



## Questionnaire B

Project Code No. \_\_\_\_\_

Name (optional) \_\_\_\_\_

Sex	Check the appropriate age category		Actual Annual Salary	
<input type="checkbox"/> Male	<input type="checkbox"/> Under 25	<input type="checkbox"/> 45 - 49	<input type="checkbox"/> Under \$ 3,000	<input type="checkbox"/> \$18,000 - \$20,999
<input type="checkbox"/> Female	<input type="checkbox"/> 25 - 29	<input type="checkbox"/> 50 - 54	<input type="checkbox"/> \$ 3,000 - \$ 5,999	<input type="checkbox"/> \$21,000 - \$23,999
Ethnic Identification	<input type="checkbox"/> 30 - 34	<input type="checkbox"/> 55 - 59	<input type="checkbox"/> \$ 6,000 - \$ 8,999	<input type="checkbox"/> \$24,000 - \$26,999
	<input type="checkbox"/> 35 - 39	<input type="checkbox"/> 60 - 64	<input type="checkbox"/> \$ 9,000 - \$ 11,999	<input type="checkbox"/> \$27,000 - \$29,999
	<input type="checkbox"/> 40 - 44	<input type="checkbox"/> Over 64	<input type="checkbox"/> \$12,000 - \$ 14,999	<input type="checkbox"/> \$30,000 or more
			<input type="checkbox"/> \$15,000 - \$ 17,999	
<input type="checkbox"/> Spanish surname			If less than full time, indicate approximate fraction of full time that you work, e.g., $\frac{1}{4}$ , $\frac{1}{2}$ , etc. _____	
<input type="checkbox"/> Oriental				
<input type="checkbox"/> Other (specify) _____				

Please indicate the complete title of the project or activity on which you are currently working. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Write your job title or position \_\_\_\_\_

\_\_\_\_\_

How long have you worked in your present job?

Number of years \_\_\_\_\_ Number of months if less than one year \_\_\_\_\_

How many people do you supervise in this capacity?

If none, write "0". \_\_\_\_\_

Briefly describe what you do on this job. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Check the highest level of formal education you have obtained.

- ☐ High school with no college level course work
- ☐ High school and some college courses, but do not have a degree or certificate yet. Number of years completed
- ☐ Two years of college completed with a degree or certificate
- ☐ Bachelors degree
- ☐ Masters degree
- ☐ Masters degree plus work toward doctorate
- ☐ Doctorate or post-doctoral degree
- ☐ Other professional degree, specify type

If you have obtained a bachelors or a higher degree, please write in your major field, e.g., education, psychology, etc.

1. Have you been employed previous to your present job? Yes ☐ No ☐

If you answered "yes", complete the remainder of this question.  
If your answer was "no", go on to the next question.

In Section A, indicate the number of years you have been employed by each type of employer. If none, write "none" in the space.

In Section B, indicate the relevance of each type of previous employment to your present job by placing a checkmark in the appropriate column.

Previous Employers	Section A	Section B		
	Number of years	Relevance to Present Job		
		Low	Moderate	High
College or university	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Educational R-D-D-E organizations	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Government	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Business and/or industry	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
School district	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other (specify) <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

2. A number of educational areas are listed below. For each of the areas, please indicate the approximate amount of formal course work, graduate or undergraduate, you have completed by placing a checkmark in the appropriate column. If you have had no course work in the area, place the checkmark in the "none" column.

Educational Areas	Number of Courses			
	None (0)	Few (1 or 2)	Several (3 to 5)	Many (6 or more)
1. Statistics	_____	_____	_____	_____
2. Learning theory	_____	_____	_____	_____
3. Social Psychology	_____	_____	_____	_____
4. Audio-Visual Education	_____	_____	_____	_____
5. Marketing	_____	_____	_____	_____
6. Sociology	_____	_____	_____	_____
7. Research design	_____	_____	_____	_____
8. Testing and measurement	_____	_____	_____	_____
9. Systems theory	_____	_____	_____	_____
10. Advertising	_____	_____	_____	_____
11. Educational administration	_____	_____	_____	_____
12. Political science	_____	_____	_____	_____
13. Philosophy of science	_____	_____	_____	_____
14. Data processing	_____	_____	_____	_____
15. Theories of teaching	_____	_____	_____	_____
16. Curriculum development	_____	_____	_____	_____
17. Communication theory	_____	_____	_____	_____
18. Decision theory	_____	_____	_____	_____
19. Information theory	_____	_____	_____	_____
20. Journalism	_____	_____	_____	_____
21. Anthropology	_____	_____	_____	_____
22. Other (specify) _____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Circle the three areas from those listed above that are most important for your current work, whether or not you have had course work in those areas.

3. On the following pages is a list of activities that may be performed by those working in educational Research, Development, Diffusion, Evaluation, and/or Planning. Please indicate the degree to which you are currently involved in each activity by entering a number value between 0 and 7 in the space provided to the left of each item. The numerical scale that you are to use is defined as follows:

- \_\_\_ 0 - Definitely not a part of my work activity.
- \_\_\_ 1 - Only a minor part of my work
- \_\_\_ 2
- \_\_\_ 3
- \_\_\_ 4 - A substantial part of my work
- \_\_\_ 5
- \_\_\_ 6
- \_\_\_ 7 - A most significant part of my work

Those numbers that are not defined may be used in accordance with your best judgment as to their positions on the scale between the anchoring definitions.

In the space following each item, please indicate the degree of your interest in obtaining additional training in the activities specified by using the following symbols:

Place a "G" in the space if you have Great Interest in additional training.

Place an "S" if you have only a Small Interest in additional training.

Place an "N" if you have No Interest in additional training.

Your Current Involvement  
(Enter one number  
from 0 - 7 scale)

Your Interest In  
Additional Training  
(Enter "G", "S", or "N" )

- |        |   |       |
|--------|---|-------|
| 1. ___ | Synthesizing literature relevant to a project   | _____ |
| 2. ___ | Choosing variables for research or experimental treatment.                                      | _____ |
| 3. ___ | Developing measuring instruments.   | _____ |
| 4. ___ | Organizing data for analysis.   | _____ |
| 5. ___ | Selecting statistical techniques that are appropriate for analysis or conducting tests of data. | _____ |
| 6. ___ | Using aids in data analysis, such as computer processing.                                       | _____ |
| 7. ___ | Drawing conclusions from data analyses and reporting findings                                   | _____ |
| 8. ___ | Specifying performance objectives of instruction.   | _____ |
| 9. ___ | Describing a product to be developed.   | _____ |

Your Current Involvement  
(Enter one number  
from 0 - 7 scale)

Your Interest in  
Additional Training  
(Enter "G", "S", or "N")

- |          |  |      |
|----------|--|------|
| 10. ____ | Designing and managing field tests   | ____ |
| 11. ____ | Revising a product based upon field evaluation.  | ____ |
| 12. ____ | Determining characteristics of target groups for product dissemination.  | ____ |
| 13. ____ | Selecting the best way to get information to target groups.  | ____ |
| 14. ____ | Composing information for widespread dissemination.  | ____ |
| 15. ____ | Implementing actual dissemination.   | ____ |
| 16. ____ | Devising long term evaluation of an installed product.   | ____ |
| 17. ____ | Identifying desired outcomes of an educational system  | ____ |
| 18. ____ | Establishing priorities among school system objectives.  | ____ |
| 19. ____ | Evaluating strategies for attaining school system objectives.  | ____ |
| 20. ____ | Determining educational program resources (human, material, financial).  | ____ |
| 21. ____ | Writing proposals for either R, D, D, or E projects.   | ____ |
| 22. ____ | Monitoring educational programs to determine deviations from design plans.   | ____ |
| 23. ____ | Developing criteria and data collection procedures for measuring effectiveness of innovative practices and products. | ____ |
| 24. ____ | Translating program objectives into behavioral terms.  | ____ |
| 25. ____ | Using techniques of measurement to derive data for establishment of standards.                                       | ____ |
| 26. ____ | Other (specify) _____  | ____ |
| 27. ____ | Other (specify) _____  | ____ |

4. Since you have been employed in this field, how much of the following kinds of training relevant to educational Research, Development, Diffusion, or Evaluation have you had? Indicate by placing a checkmark in the appropriate column after each kind of training.

Type of Training	Amount of Training			
	<u>None</u>	<u>Very little</u>	<u>Moderate</u>	<u>Extensive</u>
Special supervised on-the-job training or internship	_____	_____	_____	_____
In-service courses	_____	_____	_____	_____
Other (specify) _____	_____	_____	_____	_____

5. Several approaches to training are listed below. Indicate the value you place upon each approach either to meet current job requirements or plans you might have for personnel advancement. Place a checkmark in the appropriate column after each approach.

<u>Training Approach</u>	<u>Value of Approach</u>		
	<u>Little or no value</u>	<u>Some Value</u>	<u>Great Value</u>
A. Programmed instruction materials for your own use	_____	_____	_____
B. Three to five-day institutes	_____	_____	_____
C. Longer institutes	_____	_____	_____
D. One or two-week university short courses	_____	_____	_____
E. Correspondence courses	_____	_____	_____
F. Extension courses	_____	_____	_____
G. Other (specify) _____	_____	_____	_____

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6. How important do you feel it is to receive college credit for any additional training you might obtain? Indicate by placing a checkmark below the appropriate category.

<u>Extremely</u> <u>Important</u>	<u>Important</u>	<u>Undecided</u>	<u>Unimportant</u>	<u>Extremely</u> <u>Unimportant</u>
_____	_____	_____	_____	_____

If you checked "important" or "extremely important", please give your reasons.

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7. To what extent are you satisfied with your present job? Place a checkmark below in the appropriate category.

<u>Extremely</u> <u>Satisfied</u>	<u>Satisfied</u>	<u>Undecided</u>	<u>Dissatisfied</u>	<u>Extremely</u> <u>Dissatisfied</u>
_____	_____	_____	_____	_____

Please comment on reasons for satisfaction or dissatisfaction with your job.

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8. To what extent is advancement probable in your present job? Place a checkmark below the appropriate category.

<u>Highly</u> <u>Probable</u>	<u>Probable</u>	<u>Unknown</u>	<u>Improbable</u>	<u>Highly</u> <u>Improbable</u>
_____	_____	_____	_____	_____

Please comment on reasons for your estimate of probability of advancement

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[illegible]



## Rationale for Questionnaire B Items

Information as to age, sex, ethnic identification, education and salary will make possible comparisons with other occupations.

Job titles and descriptions will permit classification into Research, Development, Diffusion, Evaluation and Planning categories.

Responses to Question 1 will indicate the sources from which employees came in R-D-D-E work and possible relationships between R-D-D-E and other types of employment.

Responses to Question 2 will provide specific information as to educational backgrounds and help to identify training areas for future R-D-D-E employees.

Responses to Question 3 will indicate the relative involvement of R-D-D-E employees in various kinds of activities and will suggest areas of investigation for meeting needs for training.

Responses to Question 4 through 6 will indicate the kinds of training now in process for R-D-D-E personnel, the kinds they feel to be valuable and the importance of college credit for additional training. These responses will have implications for the development of training policy and programs.

Responses to Questions 7 and 8 will indicate job satisfaction and advancement possibilities and will have implications for attracting and recruiting personnel into R-D-D-E work, and providing greater value in these activities for current employees.

Appendix D

COST OF PREPARING AND MAILING QUESTIONNAIRE FOR FIELD TEST

COST OF PREPARING AND MAILING  
QUESTIONNAIRES FOR FIELD TEST

Cost of preparation

Coordination, typing and proofreading.....\$ 3.50 per page

Printing from Camera Ready Copy  
(including collating, folding and binding).....2.70 per page

Fold out master (11" x 17").....17.40 per page

Mailing envelopes (per 100).....2.00

Return envelopes (per 100).....4.80

Postage

Employer plus 4 employee questionnaires  
(including 5 return envelopes and cover material).....1.20

Employer questionnaire  
return envelope and cover material..... .40

Employer questionnaire  
return envelope and cover material..... .40

Single return..... .40

Number printed: Questionnaire A. 125, Questionnaire B. 300

Number of pages printed (32 @ \$6.50 per page).....198.00

Cost of foldouts (Photographic negative,  
plate and printing)..... 129.00

Number packages sent (71)..... 85.00

Number singles sent (38)..... 15.00

Number returned (58)..... 23.00

Approximate total cost \$456.80

Period includes: from date mailed 11/19, through 12/28/71,  
first returns received 11/23/71.